Administrative and compliance costs of taxation and public transfers in the Netherlands

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Explanation of symbols

.	figure is not available
-	nil
0	less than one half; negligible
blank	not applicable
<	smaller than
≤	smaller than or equal to
>	greater than
≥	greater than or equal to
+	and over

Due to rounding, totals do not always correspond with the sum of separate figures.

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Preface

Driving to work, John Smith senses that this is likely to be another beautiful spring day. After a short stop at his local petrol station, he heads for the first traffic jams. Soon, as the exhaust fumes reach his nostrils, the joy of such a wonderful morning begins to fade, and his thoughts turn to the worrying times ahead. Within a few days he must file his annual income tax return. Yesterday, his wife informed him that an eagerly awaited child benefit had not yet fortified their bank account. Most worrying to John Smith was the prospect that, due to a reorganisation at the firm, he may soon lose his job, and his company car. Although he knows that in that case he will receive unemployment benefit and thus be protected from immediate financial hardship, joining the swelling ranks of the unemployed fills his thoughts with horror.

Mr. Smith is, of course, a fictitious character, but he represents millions of individuals in modern welfare states. Every month, his employer withholds a substantial part of his gross salary as wage tax and contributions to various social insurance programmes. In addition, he pays income tax and motor vehicle tax every year. As a consumer, his bill is topped up with VAT. But, on the other hand, Mr. Smith can claim family allowance and rent subsidy, and he is - if the case arises - collectively insured against the risk of loss of income due to unemployment, old age, sickness and disablement. Such tax and benefit programmes are typical of modern welfare states, and they generally enjoy broad support among the population at large.

But, tax-benefit programmes come at a cost. They may reduce financial incentives to supply labour and savings. Moreover, the money flows in the tax-benefit system don't move by themselves. A large bureaucracy is needed to collect taxes and social insurance contributions, and to establish claims and pay out benefits and subsidies. Obviously, total administrative costs incurred by the public sector must be quite substantial. Costs incurred by firms and families, however, may even exceed these. Apart from paying taxes and contributions, *additional* costs arise as the result of compliance with obligations related to these levies: information must be gathered, records must be kept, forms filled out, etc. The duty to pay taxes, to withhold various payroll taxes, to collect VAT and excise taxes on sales to the public, results in compliance costs to firms. Applications for subsidies take up additional time and money. Every year, families are obliged to devote time and money to comply with various taxes, notably, the personal income tax and - in some countries - some form of wealth tax. Claiming benefits, study grants for children or rent subsidy, all give rise to compliance costs.

Internationally, a number of studies regarding administrative or compliance costs of individual tax or benefit programmes have been carried out. Rather amazingly, it appears, that *total* direct costs involved in operating the tax-benefit system of modern welfare states have never been studied before. The present study

tries to fill this gap by taking a look at the costs of operating the Dutch tax-benefit system in 1990. Both the administrative costs of public sector agencies, and the compliance costs of firms and families are determined programme by programme, taking into account money and hours spent.

In this, we put price tags on welfare state programmes. Our study demonstrates that operating a full grown tax-benefit system typically might absorb 3-4 per cent of GDP. The sheer magnitude of this number seems to justify future major research efforts in this area. It would be a great step forward if comparable studies of other welfare states would gradually become available. The lack of data on operating costs has long prevented the issue of gaining political importance. Up to now, operating costs have hardly ever been taken into account in the process of decision-making. The magnitude of operating costs might spur policy-makers to take a fresh look at the design of present programmes. Options, such as reducing total operating costs, or reallocating them between the public and the private sector, are discussed in the final chapter of this book. After all, bringing down operating costs is in the direct interest of John Smith, the owner of his local petrol station, and his employer, not to mention all those other millions of individuals who live and work in the welfare state, and pay for it.

Part 1

Theoretical and methodological background

1

Introduction

This chapter starts off with a general introduction into the tax-benefit system and related costs. Then, we discuss how both the economic literature and the public debate have largely neglected the issue of operating costs. Finally, we discuss the scope of the present study, and present an outline of the rest of the book.

1.1 Why study operating costs?

1.1.1 Transfers in the Dutch economy[1]

With over 15 million inhabitants, the Netherlands is one of the most densely populated countries in the world. The national currency is the guilder (Gld)[2]. In 1990, GDP amounted to Gld 508bn[3], or US$ 280bn. The Dutch economy is small and very open; both imports and exports make up over 50 per cent of GDP. Ever since 1980, the current account of the balance of payments has shown considerable surpluses.

Dutch society feels rather strongly about income equality. After taxes and benefits, the personal income distribution is flatter than in almost any other OECD country[4]. Being one of the most affluent countries in the world, the Netherlands could afford an impressive social security system. The system has developed through the years, particularly since the 1950s. The rise of the welfare state is reflected in the present high levels of public spending and taxation. When economic growth slowed down in the 1970s and the early 1980s, the welfare state ran into problems. And since 1982, the government has been trying to reduce public spending. As a result, the share of the public sector in GDP has gradually been reduced from its peak of 66 per cent in 1983 to 59 per cent in the early 1990s.

The expansion of the Dutch public sector until 1982 has been mainly the result of the increase of *transfer payments* ('benefits'), especially to private households. The number of benefit recipients has increased, both in absolute terms and relative to the labour force. Up to the end of the 1970s, benefit levels rose in

[1] The first two paragraphs of this section are based on De Kam [1993, p. 355-358].

[2] In 1990, Gld 1 equalled approximately US$ 0.55.

[3] bn means billion.

[4] See De Kam and Allers [1993] for a comparison of income redistribution in the Netherlands and several other European countries.

comparison with the average wage level. As a consequence, huge amounts of money are now continually transferred between the public and the private sector. In 1993, social security benefits amounted to 25 per cent of GDP, while 7 per cent of GPD was paid out under various subsidy programmes to business and private households. The flow of transfers to finance public outlays consisted of taxes (27 per cent of GDP) and social insurance contributions (19 per cent of GDP). In absolute amounts, Gld 265bn was transferred from the private sector to the public coffers, while the public sector (re-)distributed Gld 180bn through various subsidy and benefit programmes[5].

Obviously, the moving around of such enormous amounts of money has its costs. It is remarkable, however, that not much is known about such costs. Indeed, certainly in the Netherlands, the issue seems to have been largely ignored. Political debate concerning the tax-benefit system mainly emphasises the *benefits* of proposed new programmes. Occasionally, some lip service is paid to the necessity of keeping operating costs at a reasonable level. A real cost-benefit analysis, however, is never made.

1.1.2 Costs of tax-benefit programmes

Tax-benefit programmes may generate costs in two ways:
1 by evoking attempts to minimise tax bills or maximise benefits or subsidies;
2 by using up scarce resources needed to operate these programmes.

Changes in behaviour
With the exception of lump sum[6] taxes or benefits, the amount of money transferred between the public sector and individuals or organisations in the private sector may depend on all sorts of circumstances (e.g. income, assets, rent payments, employment situation, number of children). This leaves room for individuals and organisations to manipulate the amount of money they will pay or receive. Thus, the existence of given tax or benefit programmes puts a premium on some activities and a price on others. This is to stimulate individuals or organisations to adapt. Two cases may be distinguished here: (re-)organising financial, domestic, occupational, business or related affairs in such a way that tax payments are minimised or benefits and subsidies maximised, and, secondly, attempts to pay less than is due or receive more than one is entitled to. The first case is legal (e.g. tax avoidance), the second is illegal.

Illegal minimisation of tax payments or maximisation of benefits and subsidies (tax evasion, fraud) results in higher tax rates or lower benefit levels than otherwise would have been feasible. Fraudulent firms also enjoy competitive cost advantages, leading to an inefficient allocation of resources in the economy.

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[5] Sources: SZW [b, 1994 issue], MvF and MvJ [1993], MvF [b, 1994 issue].

[6] A lump sum tax or benefit payment is an amount which is fixed for the taxpayer or recipient, e.g. a poll tax. The amount transferred cannot be influenced by affected parties.

Legal ways to maximise net transfers received from the public sector include transformations regarding objects (e.g. bricking up windows because of a window tax), time (e.g. deferring taxable income), persons (e.g. putting a house in someone else's name in order to pass a means test) or space (e.g. tax flight; separation of individuals who live together because singles receive higher benefits)[7]. However, probably the most important way behaviour is influenced by tax-benefit programmes is through changes in relative prices.

Changes in relative prices

Taxes and benefits (other than lump sum) change relative prices, creating divergence among rates of substitution. An income tax or unemployment benefit, for example, may reduce the supply of labour, because such programmes reduce the relative price of leisure. An excise tax on beer may lead to higher consumption of wine. Consumption and production patterns are changed in order to adapt to a new set of relative prices, which include taxes, benefits and subsidies. This new set of prices does not reflect relative scarcities in the economy[8]. Thus a welfare loss results. This is called the *excess burden* or *deadweight loss* of the programme concerned. The excess burden of taxation is defined as the welfare loss of a tax increase that remains after the extra tax revenue has been given back as a lump sum benefit, that is, the welfare loss of the tax not being lump sum. This welfare loss is expressed as a proportion or a percentage of total tax revenue [Van Sinderen 1990, p. 252]. The excess burden of subsidies or benefit payments may be defined analogously.

The *size* of substitution effects, and thus the size of excess burdens, depends on the relevant price elasticities of demand and supply. If price elasticity is low, e.g. in the case of the demand for elementary food products (which must be bought anyhow), a tax will cause little substitution, thus the excess burden is low. It follows that, in order to minimise deadweight losses, taxes should be inversely proportional to price elasticities.

Estimates of the size of excess burdens are highly sensitive to the theoretical assumptions made, especially those concerning elasticities, and therefore vary considerably[9]. Estimates for the Netherlands range from -5.5 per cent to 636 per cent [Van Sinderen 1990, p. 259].

Since the issue of welfare costs of taxation is addressed in many economic textbooks[10], we will not dwell upon the subject here.

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[7] Compare Recktenwald [1984, p. 395].

[8] In the case of externalities, a tax or transfer may increase welfare by changing relative prices. Thus, a tax on motor fuels can increase overall welfare by reducing air pollution.

[9] Van Sinderen [1990, p. 259] presents results of twelve studies which estimate excess burdens in the United States, Sweden and the Netherlands. More recent estimates for the USA may be found in Jorgenson and Yun [1993].

[10] See e.g. Boadway and Wildasin [1984, pp. 228-256].

Thus, tax-benefit programmes induce individuals and organisations to do things they wouldn't be doing otherwise, which implies that they incur welfare losses. Although such actions will increase the welfare of individuals and organisations concerned, because their welfare losses are more than compensated for, such behavioural responses reduce overall welfare, because these compensations take the form of *transfers* (lower tax payments or higher benefit or subsidy receipts). These transfers cancel out for the whole economy. Thus, real costs result for society[11].

Use of resources
Besides indirect costs resulting from behavioural changes and changes in relative prices, operating the tax-benefit system uses up scarce resources, which could have been used differently. Costs of operating the system include the wages of staff administering tax-benefit programmes, housing costs, office equipment, time and money spent by taxpayers, benefit recipients or third parties, etc. These are the costs with which this study is concerned. *Operating costs* may be divided in *administrative costs*, i.e. costs the public sector incurs in order to administer tax-benefit programmes, and *compliance costs*, the (mainly) private sector costs of complying with regulations related to the tax-benefit system. This book focuses on the *operating costs* of the tax-benefit system in the Netherlands. Costs arising from changes in behaviour and relative prices fall outside the scope of this study.

1.1.3 Costs versus benefits

We see that transfer programmes not only generate benefits, but they produce costs as well. In order to find an optimum, benefits must be balanced against costs. Such optimisation should take place at four levels simultaneously. First, the *amounts to be transferred*, or the size of the tax-benefit system, must be decided upon. Next, the *costs* generated by such a tax-benefit system must be weighed. Then the *distribution* of such costs over the public sector and the private sector should be considered. Finally, *within the public administration*, the available budget must be allocated to the various functions. At each of these four levels, quantitative data on costs are needed in order to find an optimum. However, such data are largely lacking, both in the case of direct (operating) costs and in the case of indirect costs (resulting from changes in behaviour or relative prices). This raises the obvious question as to what the reason for the present scarcity of data might be.

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[11] Changes in behaviour of individuals or organisations induced by transfer programmes may also result in welfare gains for society, e.g. in the case of merit goods. In fact, some transfer programmes have been introduced explicitly with the aim of stimulating changes in behaviour, e.g. the location of investments in less developed areas.

1.2 Awareness of operating costs

1.2.1 Introduction

Operating costs of tax and benefit programmes have long been neglected by both the economic profession and the policy makers. Economists have been more occupied with indirect costs of taxation, i.e. excess burdens, than with direct costs of administration and compliance. This is especially true of compliance costs, which are less visible than administrative costs. A possible reason for this neglect is the complexity and costliness of compliance cost studies themselves. The resulting scarcity of empirical data may explain the apparent lack of interest of policy makers and the general public. Complaints by the business community can then rather easily be disposed of by belittling the magnitude of compliance costs, since these are unknown. Moreover, taxpayers are typically unorganised, which limits their political influence.

However, since the 1980s, awareness of the issue of operating costs has been on the increase internationally. At least, as far as taxation is concerned. Operating costs of social security or subsidy programmes are still largely neglected. Therefore, in this section, we will focus on tax operating costs. Pope [1992, pp. 2-7] identifies seven stages in the awareness of compliance costs. The first stage is characterised by a general lack of interest in the subject. The next five phases may overlap or coincide; they are 2) qualitative recognition by professionals (economists, tax advisers, etc.), 3) quantification, 4) policy recognition, 5) effective policy measures, resulting in lower compliance costs, and 6) continual monitoring of compliance costs. Although these stages have been identified for the case of Australia, they seem to apply to other countries as well.

1.2.2 Recognition

It could be argued that the second stage, recognition by professionals, was already in effect over two centuries ago. Both administrative and compliance costs are covered by the famous four maxims of taxation set out by Adam Smith in 1776[12]. Similar ideas had been expressed even before him, but Smith was the first to systematically study taxation[13]. Three of his maxims concern tax operating costs. The second maxim states that 'The tax which each individual is bound to pay ought to be certain, not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person'. In his third maxim, Smith insisted that 'Every tax ought to be levied at the time, or in the manner, which it is most likely to be convenient for the

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[12] Inquiry into the Nature and Causes of the Wealth of Nations, Book 5, Chapter 2. See e.g. Smith [1966, pp. 307-309].

[13] Smith seems to have based his maxims largely on the four tax principles of Cardinal de Luca (1614-1683) [Michel 1962, p. 1].

contributor to pay it'. Finally, the fourth maxim states that 'Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state'. Although these maxims have been cited widely, the first one, which stresses equality of taxation, has received most attention, while the other three, which are related to operating costs, were in many cases merely paid lip service to [see also Sandford et al. 1989, p. 25][14]. In fact, this situation has continued until very recent times.

1.2.3 Cost studies

After recognition, the next step is quantification. No studies of the compliance costs of welfare or subsidy programmes are known to the author. In the 1980s and early 1990s, a number of studies of the administrative costs of social security programmes in the Netherlands have been published. These will be discussed in Chapter 4. Outside the Netherlands, as far as we know, administrative costs of social security programmes have been studied in only a few isolated cases (e.g. Goetschius and Wicks [1971] in the United States, Mendelson [1979] in Canada). More work has been done on the operating costs of taxation, though. We will focus on that topic now.

North America
The earliest research on tax operating costs, which started in the 1930s, was carried out in the United States[15]. Until the end of the 1960s, a rather constant flow of (mostly compliance) cost studies was published in this country. While the first studies attempted to estimate a single cost figure for all taxes together, later studies generally focused on one particular tax, sometimes in one particular state or city. Most studies are concerned with compliance costs to business; costs of personal taxation were studied for the first time in the 1960s. Methodologically, most of the early studies are very weak. They often are based on very small and non-representative samples, while the included costs are only loosely defined. Many of them are published in hard to find journals or monographs. These early attempts raise a number of interesting methodological questions, though, which still makes them interesting to read. This is especially true of Yocum [1961] and Mueller [1963], by far the most thorough studies of this period. In the same

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[14] An exception is McCulloch [1975 (first published 1845), pp. 38-39], who stressed that the last three maxims were in fact most important. He actually supplied some administrative cost estimates as examples of taxes which went against these maxims. E.g., in France, in 1598, 120 million livres were spent in order to collect a net tax revenue of 30 million livres.

[15] Appendix B summarises all studies on both administrative and compliance costs published in English, Dutch or German that the author has been able to trace. In this section, we can only give a brief overview; no attempt is made to discuss every single study. A more comprehensive overview of the studies published in English is given by Sandford et al. [1989, pp. 27-34].

tradition is the study of Bryden [1961], which estimates the compliance costs of business taxes in Canada.

The period around 1980 yielded a number of studies of the compliance costs to business of government regulations in general, which sometimes seemed to include taxation (e.g. Cole and Tegeler [1980], Berney [1980], Arthur Andersen [1981], Sommers and Cole [1981], Berney and Swanson [1982]). In the 1980s, again several studies were published which focused on compliance costs of particular taxes (Peat, Marwick, Mitchell [1982], Slemrod and Sorum [1984a or 1984b], Arthur D. Little [1988], Blumenthal and Slemrod [1992]). We refer to these studies in Chapters 5 and 6, where we compare their results with our own findings.

The Netherlands

The first European study we are aware of took place in the Netherlands, where Hofstra [1943-1944] estimated compliance costs of the newly introduced wage tax. Methodologically, this study was rather weak, though. The next Dutch study came decades later, when the Research Institute of Small and Medium-Sized Business, EIM [1970], estimated the costs of compliance work contracted out to e.g. accountants or tax advisers, by firms with 100 employees or less. The most thorough Dutch study to date is that of Snijder [1981]. He used accountants to interview the owners or managers of the (small and medium-sized) businesses they worked for. Unfortunately, the sample was rather small, and the scope of the study limited. Two more studies have been conducted in the Netherlands, but again these are very weak methodologically (ACE-Resultants [1984] and Leerstoel Marktbeleid [1991a]). These studies follow the 'German tradition', in that they attempt to measure the compliance costs of all administrative obligations to business. Apart from taxation, these include all kinds of regulations which the government imposes on the business sector, e.g. related to employment, safety of the working place, business licensing, etc.

Germany and Switzerland

The German literature on operating costs may be conveniently divided into two periods. In the 1950s and the 1960s, research was focused on particular taxes, concerning both businesses and self-employed (IFO [1953], Strümpel [1966a, 1966b], Schmidt [1968], and Niehus [1969]). In the 1970s and the early 1980s, attention shifted to the costs to business of government regulations in general (costs of bureaucracy; 'Bürokratieüberwälzung', e.g. Bund der Steuerzahler [1972 and 1981], IHK [1976], Hamer [1979], and Klein-Blenkers et al. [1980]). Usually, the costs related to taxation alone are difficult to extract from the results of these studies. Most of them were methodologically not very strong; several were carried out by business or taxpayer pressure groups, without trying to hide that not scientific interest but political usefulness was the main motive behind the studies. Also in the German tradition is the thorough study of Hunkeler [1985] of the compliance costs of government regulations for small and medium-sized firms in Switzerland. During the 1980s, several studies were published which again focused on the operating costs of taxation (Täuber [1984], Tiebel [1986], Bauer [1988]).

When we compare the results of our own study with findings of earlier research, we discuss these studies in greater detail.

United Kingdom and Ireland

The most comprehensive and thorough study of tax operating costs was carried out at the University of Bath, UK, by the team of Professor Sandford, who may be considered the *éminence grise* among students of tax operating costs. Using mainly large-scale surveys, compliance costs of various personal and business taxes were estimated, most importantly those of personal taxes [Sandford 1973], VAT [Sandford et al. 1981] and PAYE (payroll tax) [Godwin et al. 1983]. Two decades of research resulted in the first scientific estimate of the operating costs of an entire tax system, published in Sandford et al. [1989]. This publication may also be considered as a must for anyone interested in related methodological questions and policy issues. Our own study owes a lot to the work done at Bath. The same is true of two Irish cost studies, Leonard [1986] and Sandford and Morrissey [1985], which are discussed in Chapter 6.

Recent developments

Recently, interest in our subject seems to have grown considerably. In the late 1980s and early 1990s, compliance cost studies were carried out in a number of countries. Generally, these were of a much better quality than earlier studies. Thus, the third stage in cost awareness as identified by Pope, quantification, was reached in a number of countries. The results and methods of these studies are discussed in some detail in later chapters, where we compare the results of our own study with those of other research.

A milestone, already mentioned, was the publication of Sandford et al. [1989]. The work at Bath seems to have inspired similar studies in other countries. At the University of Western Australia, several studies on compliance costs have been carried out [Pope et al. 1990, 1991, 1993a and 1993b], while Sandford and Hasseldine [1992] have studied the compliance costs of business taxes in New Zealand. In Canada, Vaillancourt [1989] estimated the administrative and compliance costs of personal income tax and payroll taxes. In the United States, the study of Slemrod and Sorum [1984a or 1984b] has been repeated, in order to establish whether the compliance costs of personal income tax have dropped, following legislative changes [Blumenthal and Slemrod 1992].

In 1989, administrative and compliance costs of taxation was one of the two main subjects of the congress of the International Fiscal Association, which greatly helped to introduce the subject to a wider audience[16].

[16] The Cahier published in connection with the congress refers to studies in various countries [IFA 1989].

1.2.4 Policy recognition and measures

Deregulation
Apart from the occasional lip service paid to the subject, the phase of policy recognition in the Netherlands really started in the 1980s. It is difficult to speculate why just then. Probably the economic slump in the 1970s and the early 1980s, and the resulting crisis of the Dutch welfare state, helped create a political climate in which the role of the public sector in the economy met with increasing criticism. Gradually, it was realised that the ever-increasing size of the public sector and the related growth in the number and the complexity of government regulations puts substantial burdens on the private sector. Deregulation became an explicit policy objective, and consensus grew to the extent that the size of the public sector had to be reduced.

In 1985, a test of new legislation *(wetgevingstoets)* was introduced. Before being discussed by the Council of Ministers, every bill must be subjected to a test, which among other issues[17] includes the costs related to the proposed legislative change, both to the public and the private sector. Part of this general test is a specific test of the effects on business *(bedrijfseffectentoets)*, which is referred to below. Recently, attempts have been made to strengthen procedures, because the implementation of the test has not yet been fully satisfactory (e.g. MvJ [1991]).

Tax simplification
The fact that the Dutch tax system is more complicated than is deemed desirable has been recognised for a long time now. Already five official commissions, dating back to the 1930s, have worked out proposals for tax simplification[18]. The net effect of these efforts, though, seems to be negligible[19].

In the 1980s, the complexity of taxes on personal income became of special concern to the government. With a short interval, two commissions reported on simplification of personal income tax and related social insurance contributions. The proposals of the Oort Commission [1986] resulted in the introduction of the so-called Oort-legislation (1990, see section 4.4.3). However, much of the contribution of the original proposals to greater simplicity seems to have been lost in the political battle, in part as a consequence of fierce opposition from special interest groups. The proposals of the Stevens Commission [1991], which was appointed in the same year that the Oort-legislation came into effect, first met with remarkably positive reactions, but soon criticism from affected parties grew. At the time of writing, no government decision on the proposals had yet been reached.

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[17] E.g. legitimacy, effectiveness, feasibility, simplicity, etc.

[18] Bodenhausen Commission (1937), Van den Berge Commission (1947), Hofstra Commission (1955), Oort Commission (1985) and Stevens Commission (1990).

[19] See Stevens Commission [1991, p. 123].

Administrative burden on business

Apart from attempts to simplify the personal income tax system, the policy interest in compliance costs has been limited mainly to the costs to business. After years of complaints from the business community, a commission was appointed to study the administrative burden of government regulations on business (related mainly to taxation and social insurance programmes). This so-called Grapperhaus Commission reported in 1985 [Grapperhaus Commission 1985]. Few of its proposals, however, have been accepted by the Cabinet. Some have been rejected outright, while others became the object of study by special working parties.

In its reaction to the proposals [EZ 1989b, p. 4], the Ministry of Economic Affairs expressed some interesting views on the subject of compliance costs: such costs are thought of as an ordinary part of total production costs. Transfer of compliance costs to the public sector would serve no purpose, and would only result in a higher overall tax level, which goes directly against present government policy. The obvious assumption here is that firms will include compliance costs in their sales prices, as they do with ordinary production costs. In Chapter 8, we see that this assumption is largely unfounded, because of the very uneven distribution of compliance costs. The government also seems to put a considerable amount of trust in technical innovations to take care of the problem of business compliance costs. Electronic Data Interchange (EDI) and increased automation are supposed to cut both administrative and compliance costs in the near future.

Notwithstanding these reservations, it seems that the importance of the legislative burden on business, and especially the problematic *cumulation* of regulations, is being recognised by policy makers now[20]. An important policy instrument in this respect is the business effects test *(bedrijfseffectentoets)*, which is part of the more general test of new legislation referred to above. In order to assess the effects of proposed legislative changes on business, every bill must be accompanied by a section which specifies such effects[21]. An important part of the business effects test is an assessment of the consequences of the proposals for compliance costs. Unfortunately, this assessment is usually qualitative in nature; expected compliance cost changes are not quantified. Although the business effects test was introduced some time ago, it hasn't caught on until very recently[22]. Perhaps it is significant in this respect, that Parliament has rejected a motion to the effect that, before any legislative change, it must be made clear whether or not compliance costs will actually change as a consequence *(motion Van Erp)* [Commissie MKB 1991, p. 6].

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[20] See e.g. EZ [1989a, pp. 110-112].

[21] The Ministry of Economic Affairs, which coordinates this test, published a leaflet on this subject for the benefit of the other ministries and Parliament [EZ 1993].

[22] The Ministry of Economic Affairs seems to have taken the initiative to reinforce implementation of this test by other ministries. In a newspaper interview, a senior staff member of this ministry claims that intervention of Economic Affairs saved firms Gld 400m of compliance costs related to new legislation concerning sickness benefits (Het Financieele Dagblad, 9 June, 1993).

Administrative costs

Until very recently, political interest in administrative costs has been virtually non-existent. According to article 4 of the Government Accounts Act *(Comptabiliteitswet 1976)*, the government budget should include annexes which relate outputs to costs. These annexes, called output budgets *(prestatiebegrotingen)*, are required only when this is deemed feasible and useful, though. The National Audit Office *(Algemene Rekenkamer)* found that output budgets are often lacking completely, and generally miss cost figures in case they are published [Algemene Rekenkamer 1988b]. It is explicitly stated that this is partly due to lack of interest on the part of ministries and Parliament alike [pp. 12-13]. Still, attempts are being made to improve the scope and quality of output budgets [MvF b, 1994 issue, pp. 81-82].

Article 15 of the Government Accounts Act stipulates that all policy proposals should be accompanied by estimates of the related costs for the public budget of the state. Thus, expected changes in administrative costs resulting from legislative changes should be assessed beforehand. Again, the National Audit Office found that this was done satisfactorily in only a minority of the cases it studied (19 out of 97 cases) [Algemene Rekenkamer a, 1987 issue, pp. 29-35].

Nevertheless, in the late 1980s and the early 1990s, the issue of operating costs gained some importance. The crisis of the social security system finally drew attention to the administration of the system. Moreover, the drive for budget cuts led to a critical examination of subsidy programmes, including administrative efficiency. Thus, e.g., Parliament[23] commissioned a private research institute to study the efficiency of the administration of government benefit and subsidy payments [Kabel et al. 1992]. The Ministry of Social Affairs asked the Social Insurance Council *(Sociale Verzekeringsraad, SVr)* to establish how and when information concerning the administrative costs of social insurance programmes could be generated[24]. Presently, a project is being carried out which is aimed at producing administrative cost data, related to output, for virtually every ministry [MvF b, 1994 issue, pp. 82-83].

All in all, we must conclude that, although policy recognition has been on the increase lately, the last two phases in the awareness of operating costs as identified by Pope, i.e. implementing effective policy measures and continual monitoring of operating costs, have not yet been reached in the Netherlands (nor indeed in any other country).

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[23] *Commissie voor de Rijksuitgaven, Tweede Kamer.*

[24] The SVr supervises the Dutch social insurance system (see also Chapter 4). The Ministry's demand resulted in a series of reports, from which, at the time of writing, still no final conclusions had emerged [SVr 1990, 1991a, 1992a, 1992b, 1992c and 1993].

1.3 Scope of the study

This study is aimed at estimating the costs of operating the total Dutch tax-benefit system. Here, we specify this rather general aim, and define the limitations of the study.

1.3.1 Tax-benefit system

The tax-benefit system, as the concept is used here, covers all money flows between the public and the private sector, which have the nature of a *transfer*. A transfer payment is characterised by the fact that it is not *directly* made in *exchange* for something else, like the payment in a market transaction. Typical examples of transfers are taxes, benefit payments and subsidies. Of course, taxpayers receive various government services in return for their tax payments, but there is no *direct* relationship with the amount they have contributed to the fisc. The amount of tax paid by a particular individual has no bearing on the extent to which he or she benefits from government. In the literature, transfer payments are often synonymous to welfare payments, however, and therefore we usually refer to 'taxes and benefits' or 'tax-benefit programmes'.

There has been some discussion whether social insurance contributions are, by nature, taxes, insurance premiums, or a mix of both[25]. The issue hinges on whether there is a (direct) link between benefits received and contributions paid by individuals participating in such programmes. In the Dutch social security system, that connection is rather weak. Therefore, contributions are treated as transfers here; they may be viewed as ear-marked taxes. This means that social insurance contributions and benefits may be analysed separately. In this book, though, we refer mostly to social insurance 'contributions' or 'premiums', instead of 'taxes', because this is the most common terminology. Thus, transfers may be divided into taxes (including social insurance contributions), which flow from the private to the public sector, and welfare (or benefit) payments and subsidies, going the other way. The difference between welfare payments and subsidies is that subsidies are generally linked to specific purposes, e.g. rent payments, whereas welfare payments may be spent on anything the recipient fancies. There is no clear borderline though; family allowances, usually considered as a welfare payment, might just as well be viewed as a subsidy on children, while rent subsidy is rather similar to a welfare programme.

Transfers may be of two kinds: *money transfers* and *transfers in kind*. Examples of the latter are food stamps and free medical treatment. Here, we are concerned with money flows; benefits in kind fall outside the scope of this study. Of course, benefits in kind also generate money flows, but these are directed at the suppliers of goods and services, e.g. hospitals and schools, not to benefit

[25] For a discussion see De Kam [1988, pp. 91-93].

recipients. Benefits in kind may well be considered as goods or services provided by the government, instead of as benefits.

This study looks at transfers *between* the public and the private sector only. The *public sector* is defined as the government proper, plus all social insurance agencies. Anything else is considered as part of the private sector. Transfers *within* these sectors are not studied here. Thus, the costs of withholding payroll taxes from government employees are not included. Transfers to or from *local governments* are excluded from the study as well. The one exception here is property tax, which at the beginning of our research was still collected by the Tax and Customs Administration. Furthermore, we limit the analysis to programmes that are regulated by public law. This excludes e.g. early retirement schemes *(VUT)*, which are often administered by social security agencies, but which are regulated by collective employment contracts.

1.3.2 Programmes included in the study

It is difficult to determine the exact number of tax and benefit programmes in the Netherlands. Many programmes are very small in size, and concern only very limited groups of firms or individuals. The exact number of programmes will also depend on the precise definition of a transfer, because there are some hazy border areas. Roughly speaking, there are about 750 different tax-benefit programmes in the Netherlands, 700 of which are (mostly minor) subsidy programmes. Obviously, the quantification of the operating costs of all 750 programmes would be a Herculean task. Moreover, in the case of many small-sized programmes, the costs of estimating operating costs would exceed the benefits of such an operation. Inevitably, a selection has to be made. It was decided to confine the research to tax-benefit programmes which amount to Gld 100m or more annually. Some degree of arbitrariness seems unavoidable here. We eventually selected thirty (clusters of) tax-benefit programmes for further analysis. The selected programmes generated a money flow of Gld 300bn in the early 1990s[26].

1.3.3 Costs

Both administrative and compliance costs, as far as these could be estimated at all, are included in our research. The concepts of administrative and compliance costs are defined and discussed extensively in the next chapter. Apart from cost estimates proper, the distribution and incidence of such costs are also analysed.

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[26] Counting tax revenues, including social insurance contributions, and subsidy and welfare payments. A complete list of selected programmes and related money flows may be found in section 7.1 (table 7.1).

1.3.4 Year

Unfortunately, it has not been possible to estimate the operating costs of all programmes considered for one single year. The research for this book took several years, because of its time-consuming nature. Surveys, to gather the necessary data, were conducted in different years, and some administrative bodies could not supply administrative cost data for our target year, which is 1990. Thus, some estimates apply to shortly before or after 1990[27]. This doesn't seem to be much of a problem, really, because prices have remained fairly constant. In fact, estimates related to whatever year can only indicate the cost level at a given moment. Thus, our estimates are thought to give a fairly accurate picture of operating costs in 1990.

1.3.5 Purpose

The purpose of this study may be summarised as the analysis of the level, distribution and incidence of administrative and compliance costs of tax-benefit programmes regulated by public law, which give rise to money transfers amounting to at least Gld 100m annually between the public and the private sector in the Netherlands, in 1990 or in a year as close to 1990 as possible.

Although operating costs have been studied before, this is the first study aimed at estimating the costs of an entire national tax-benefit system.

1.4 Outline of the book

The chapters in this book are organised into three parts. Part one is concerned with the theoretical and methodological background of the study. It consists of this introduction, a chapter on conceptual and theoretical issues and a methodological chapter.

Chapter 2 defines the concepts of administrative costs and compliance costs. Factors determining the level of administrative and compliance costs are reviewed in turn, and a framework is provided for determining the optimal level of both types of costs. Finally, the relationship between administrative costs and compliance costs is analysed.

Chapter 3 discusses problems related to the actual measurement of operating costs. First various possible methods to quantify both administrative and compliance costs are examined, e.g. documentary analysis, surveys, etc. Then, several valuation problems are considered, e.g. related to non-monetary costs, like time spent.

Part two constitutes the core of the book. Here the operating costs of the Dutch tax-benefit system are estimated. We start with administrative costs (Chapter

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[27] Of course, this will be indicated when the relevant estimates are presented.

4). The various tax-benefit programmes are treated subsequently. First, the nature of each programme and its administration are briefly outlined, then, the related administrative costs are estimated.

Chapter 5 concerns compliance costs to business. After discussing the survey used to gather the necessary data, compliance costs are analysed by subgroup of firms. Aggregate compliance costs are related to firm characteristics, like size and branch of industry, and broken down into components and particular tax-benefit programmes. Thus, the organisation of this chapter differs from that of the previous one, which describes the various programmes one by one. This approach has been chosen in order to better appreciate the economic consequences of the distribution and incidence of compliance costs to business. Finally, the results are compared with those of foreign studies.

Chapter 6 discusses the household survey, and the estimates of compliance costs to private households. Tax-benefit programmes are considered one by one, and the results are compared with those of previous studies.

The last part of the book sums up the results of part two, and presents an estimate of the total costs of the Dutch tax-benefit system (Chapter 7). The final chapter summarises the main results of the study, and briefly outlines the policy implications.

Chapter 8 is followed by a bibliography and several appendices. Appendix A offers technical details of the business survey. A review of all known previous studies on operating costs is presented in appendix B. Appendix C briefly discusses several statistical measures used in this study. Finally, appendix D lists the abbreviations used throughout the book.

A final word on the presentation of numbers seems to be in order. Generally, numbers have been rounded to two effective digits. Usually, adding more digits doesn't add relevant extra information, while two digit figures are easier to read and remember[28]. Perhaps a more important reason, however, is that most of the figures in this study are *estimates*, which are surrounded by a certain amount of uncertainty. Adding more digits could give a false sense of precision, which we want to avoid. An explanation of symbols used in the tables is given immediately after the table of contents of this book.

[28] Van Herwaarden [1987].

2

Conceptual and theoretical issues

In this chapter, administrative costs and compliance costs are defined. Determinants of these costs are listed and briefly discussed, and guidelines are supplied according to which given levels of administrative or compliance costs may be judged normatively. We conclude the chapter with a discussion on the relationship between administrative and compliance costs.

2.1 Administrative costs

2.1.1 Definition

Administrative costs are defined here as costs incurred by (mainly) public sector agents in order to administer the tax-benefit system. Costs made by the public sector in its capacity of taxpayer or tax withholding agent (e.g. the costs of withholding payroll taxes from civil servants) are compliance costs, not administrative costs. Components of administrative costs include wage costs, housing costs, outlays for office equipment, computers, communication (telephone bills, stamps) and so on. The costs of a tax or benefit programme can be viewed alternatively, either as the costs that would not have been made had the tax or benefit programme never been introduced, or as the costs that are no longer made after abolition of the programme. In the short run, both concepts may lead to different outcomes: a new tax will cause temporary introduction costs, and overhead costs will not immediately drop following the reduction of an organisation's responsibilities. In the long run, both cost concepts will converge.

A host of activities is related to the operation of a tax-benefit system: the levying of taxes and social insurance premiums, handling applications, informing the public, administration, coordination, evaluation, control, supervision, ... It is not immediately obvious, exactly *which activities* should be attributed to the operation of the tax-benefit system. Collecting taxes and paying benefits and subsidies immediately qualify, of course, but what about the costs of new legislation itself, or the costs of the legal system, as far as it is occupied with issues concerning taxes or benefits? There is no obvious borderline here. Sandford et al. [1989, p. 5] argue the case for exclusion of most of these costs; administrative costs are defined as the public sector costs of operating an existing tax code, including advice on its modification. Costs incurred directly by revenue departments bringing cases before the courts do count as part of administrative costs according to this definition, but the general costs of running that part of the legal system which is associated with interpreting and enforcing the tax statutes in the courts do not.

Theoretically, the case for exclusion of such costs does not seem to be very strong. Such costs arise because the tax-benefit system exists; excluding them seems rather arbitrary. On the other hand, it is obviously not feasible to include *all* costs related to the tax-benefit system. They are too much spread out, and borderlines (e.g. between policy-making and policy enforcement) remain hazy, no matter how strictly one tries to define them. Moreover, specifically required cost data are often not available.

The question is, whether it pays to develop a precise definition of administrative costs, which specifies exactly which costs to include. Court costs, for example, are very small compared to total administrative costs[29]. Similarly, direct costs of making new policy will be relatively small. Including or excluding such costs will not make much of a difference, especially as measurement errors tend to be large, as is explained in Chapter 3. The main purpose of this study is to estimate quantitatively the level of operating costs. In order to be able to do so, a rather pragmatic approach has been chosen. Administrative costs are simply defined as *the public sector costs of operating the tax-benefit system*, without a detailed specification as to which costs should be included and which should not. In the following chapters we show that error margins are just too large to benefit from a high level of detail. In practice, the approach taken will lead to the exclusion of court costs and the like, because of lack of data, or lack of substance, or both. Costs which *are* included are stated separately for each cost figure.

Apart from borderline questions, two other definition problems must be faced. The first is related to the fact that apart from *regular* costs there exist *commencement* and *temporary* administrative costs, caused by legislative changes or the introduction of new taxes and benefit programmes [Sandford et al. 1989, pp. 16-18]. Commencement costs are the once-only costs effected by the introduction of, or a major change in, a tax or benefit programme, for example, the costs of new computer software or the costs of setting up a new administration in order to operate a newly introduced tax or benefit programme. Temporary costs are the additional costs incurred during the time it takes to get acquainted with new or changed regulations. On the other hand, regular costs are the costs of operating an existing tax or benefit programme.

It may be argued that only regular costs should be included in the analysis, because otherwise the resulting estimates would highly depend on the moment of measurement: immediately after a programme change, costs will be relatively high. Therefore, administrative costs should best be measured when there has not been a legislative change for some time. On the other hand, it can be argued that temporary and commencement costs *should* be included, because they are an essential part of the costs of the tax-benefit system. In the Netherlands, as well as in many other countries, the problem is merely academic, because legislative changes have become so frequent that it is hardly possible to plan a cost study for a period when only regular costs are incurred. Continuous adaptation to new regulations has become an integral part of administration. Some care is needed,

[29] Vaillancourt [1989, p. 78].

however, to avoid periods with extremely high temporary costs, for example, shortly after the introduction of a completely new tax or benefit programme.

Finally, there remains the question of whether *integral* or *additional* costs should be studied. Often, the administration of a tax or benefit programme is combined with the administration of other activities. These 'other activities' may themselves be linked to tax-benefit programmes, or they may be associated with other public programmes. Thus, a tax collecting agency may collect both wage tax and social insurance premiums. Both are levied on wages, and are administered simultaneously. The question which then arises is, whether the administrative costs of collecting social insurance contributions are additional to the costs of collecting wage tax, which are incurred anyway, or whether collection costs should be divided between social insurances and wage tax, according to some distributive code. A similar problem arises in the case of compliance costs. Because this issue has been discussed mainly in the literature on compliance costs, it is dealt with in section 2.2.1.

2.1.2 Factors determining administrative costs

After having defined administrative costs, we may now turn towards the factors that determine the level of such costs. In the literature, many variables influencing the level of administrative costs are mentioned [e.g. Mendelson 1979; Dean 1975; Goetschius and Wicks 1971; Van der Drift et al. 1986; Bauer 1988]. These factors may be subdivided into *exogenous* and *endogenous* variables. Exogenous variables cannot be influenced by the agency which administers the relevant tax or benefit programme. Some of them can be controlled by the government, however. Endogenous variables are those within control of the administrative agency in question.

Exogenous determinants

Probably the most important exogenous determinant of administrative costs of a tax or benefit programme is the number of parties (firms, individual taxpayers or beneficiaries) concerned: the *caseload*. Not only the number of parties at any given moment (caseload *stock*) is important, but also the average number of new entrants and those leaving the programme in a given period (caseload *flow*). Caseload flow is especially important for social security programmes; new enrollees generally are more demanding administratively than individuals already registered.

The nature of the caseload is another important exogenous determinant of administrative costs. Hardly ever are all cases administratively equally demanding. For example, taxpayers with business income require more effort than employees paying wage tax, and families on general assistance with children will cause the authorities more work than those without. The influence of *caseload complexity* on administrative costs will depend on the design of the tax or benefit programme in question.

Programme design, the way a tax or benefit programme is organised, is also an important factor which determines the level of administrative costs. Deduction

of tax at source, for example, greatly reduces administrative costs, partly by transferring them to the private sector. Frequency of payments will also influence costs.

Part of programme design relates to *programme complexity*, or complexity of regulations prescribing how the programme should be administered. If more factors have to be taken into account, in order to establish taxability or entitlement to benefit, and the more difficult such factors are to ascertain, the higher the costs will be. The effect of regulation complexity on costs is not unambiguous, however. Less complex rules, e.g. making it easier for taxpayers to claim tax deductions, can actually increase administrative costs, because more people will then claim deductions, hence cause additional work for the tax authorities [Slemrod 1992, p. 53].

Changes in regulations will generate adjustment costs. Staff will have to learn about the new rules; information systems and computer software will have to be developed or updated, and so on. The frequency with which regulations are changed, and the extent of those changes, will therefore also influence the level of administrative costs.

Attitudes of taxpayers and benefit recipients are also of interest here. It is only natural, that a conflict of interests exists between taxpayers, who want to minimise their tax payments and compliance costs, and the tax authorities, who want to maximise compliance and revenues. Benefit and subsidy recipients will want to maximise transfers received on the one hand, and minimise the necessary effort on the other hand. There are legal ways to achieve the desired result: avoidance of taxable activities, and creating circumstances that trigger maximum subsidy or benefit (e.g., a couple may decide not to live together, because general assistance benefits are higher for singles). Such behavioural responses generally remain outside the responsibility of the administering bodies. Illegal activities, however, like tax evasion, must be countered. The willingness of the public to comply with existing regulations, therefore, directly influences administrative costs. There is evidence that such attitudes may differ considerably across countries[30].

Technical progress can increase productivity, and may, therefore, reduce cost levels. The increasing availability of computers is particularly relevant here.

Finally, *scale of production* will have a bearing on the cost level.

Endogenous determinants

There are two ways in which the public administration can influence costs: by choosing *what* to do and by deciding *how* to do it.

Although organisations administering taxes or benefit programmes carry out the law, there will always remain some degree of freedom regarding the vigour with which rules are implemented. No regulation can be so specific as to leave no

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[30] A large-scale survey in W-Germany, Britain, France, Italy and Spain found large differences in tax mentality between countries. In France, Italy and Spain, cooperation of the business sector with the tax office is virtually non-existent. Tax mentality in Britain is much better than in the other countries, resulting in a smoothly functioning tax system at relatively low costs [Schmölders 1970].

scope for discrete decision-making. So, the organisation's *job interpretation* will directly affect the level of administrative costs. More stress on customer relations or fraud suppression will inevitably increase costs.

The second endogenous determinant of administrative costs is the way tasks are carried out: *efficiency*.

The next section elaborates on endogenous determinants.

2.1.3 The optimal level of administrative costs

Of all factors determining the administrative costs of an existing tax or benefit programme, only a few can be influenced by policy measures. These include:

- *Programme design*. Perhaps simplification is possible without changing the outcomes of the programme under consideration;
- *Job interpretation* or *quality*. Which tasks should an administrative agency perform?
- *Productivity*. How much output can be produced with one unit of input?

Through these determinants, the administrative costs of existing programmes may be controlled by the legislator (programme design), the administrator (job interpretation) or by both agents (productivity, see below).

The question now arises as to what level of administrative costs policy makers should aim at. Once the administrative costs of a given programme are known, how should the cost level be judged? Costs may be considered too high when reductions are possible without affecting the effectiveness of the programme. Thus, productivity should be maximised, while programme complexity should be kept under control. However, reducing complexity may not be possible without changing the impacts of the programme. Thus, costs and benefits of programme simplification must be considered. The same holds true for the quality of the work of administrative agents.

Programme design

The design of a tax or benefit programme determines, to a high degree, the costs of its administration. As a rule, complex programmes will be more expensive to administer. Complexity may also be described in terms of the *selectivity* of the programme [Mendelson 1979, p. 9]. In order to establish whether tax must be paid or whether benefit or subsidy may be paid out, and to determine the amount of the transfer in question, a number of relevant factors have to be taken into account, e.g. income, assets, age, household composition. Selectivity depends on the number of factors that have to be taken into account, how difficult these factors are to ascertain, and the required degree of certainty. Mendelson [1979, p. 10] suggests picturing selectivity as a matrix of all factors which must be taken into account, measured against a scale of 'degrees of difficulty', dependent on the degree of certainty to which relevant factors have to be ascertained.

An example might clarify this. Suppose certainty is simply recorded as high, medium or low. The selectivity matrix for a simple (hypothetical) old age pensions programme might read as figure 2.1. Only three factors are needed in order to

establish entitlement and amount of benefit: age, place of residence and value of assets. The degree of difficulty varies by factor (age is easier to establish than assets), and also depends on the required degree of certainty (a high degree of certainty is more difficult to realise). If the administration of the programme requires a high degree of certainty about age, a medium degree of certainty about residence and a low degree of certainty about assets, the selectivity of the programme is 3 + 4 + 5. Increasing the required degree of certainty about assets to medium would increase selectivity to 3 + 4 + 7.

In order to use the selectivity variable for the analysis of administrative costs, an objective method will be needed so as to assign degrees of difficulty to levels of certainty. Moreover, many factors will have to be listed, and these factors will then have to be weighted according to the number of times per year they have to be ascertained.

Apart from selectivity, several other design variables may eventually influence the level of administrative costs of a tax or benefit programme. Important additional variables are frequency and delivery of payment. The use of third parties for collection or payment is also an important determinant, which is elaborated in section 2.3.1.

Figure 2.1 Selectivity matrix of a hypothetical old age pensions programme

	Degree of difficulty								
Factors	1	2	3	4	5	6	7	8	9
Age	l	m	h						
Residence			l	m	h				
Assets					l		m		h

Note: the degree of certainty with which each factor is ascertained is characterised as low (l), medium (m) or high (h).
Source: adapted from Mendelson [1979, p. 11]

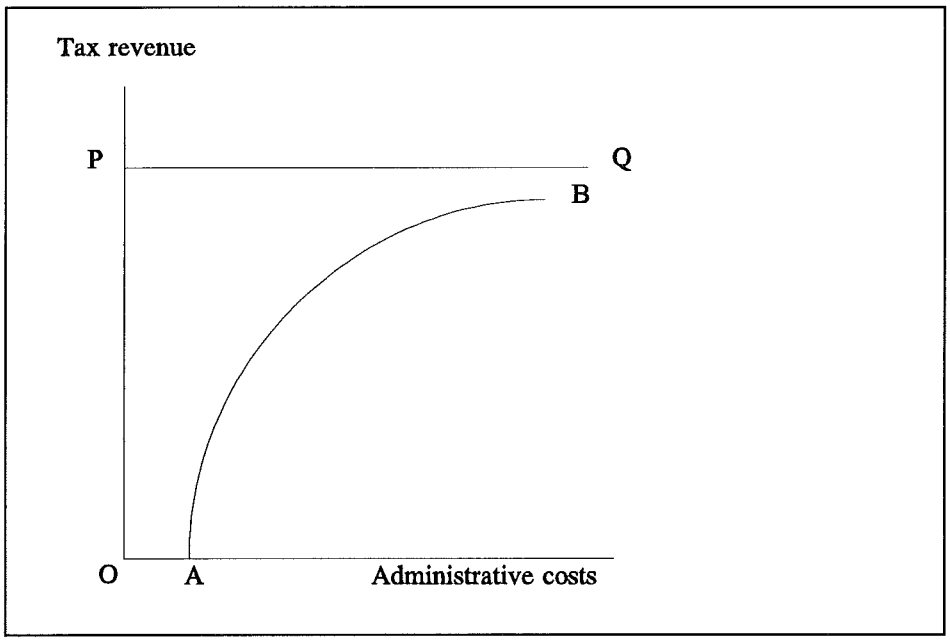
Job interpretation

The main task of an administrative agent is to ensure that the right amounts are paid by or to the right individuals and organisations. In some cases, the agent has additional responsibilities, e.g., in the Netherlands, helping disabled workers receiving benefit under the AAW/WAO programme to re-enter paid employment. Then there is the responsibility of minimising compliance costs, including psychological costs, such as worry and anxiety. The carrying out of such tasks may be considered as the *output* of an administrative agent. The question arises, as to how much money should be spent on these activities, or, what level of output is desirable.

The relationship between costs (input) and output may be illustrated by the example of a tax collecting agency (figure 2.2, taken from Dean [1975, p. 5]). Tax revenue, depicted by the line AB, will increase with resources employed. OA represents fixed costs; above OA, revenues arise. Because of decreasing returns to scale, the slope of the revenue curve will flatten and eventually approach asymptotically the horizontal line which represents potential revenue (PQ). The tax

authorities are left with a hard core of taxpayers from which it is increasingly difficult (and costly) to collect, either because they don't want to pay or because they fail to understand the relevant tax rules. Potential tax revenue equals average tax rate times tax base. Tax avoidance, minimisation of tax payment by legal means, will erode the tax base, and therefore limit potential revenue. Tax evasion, which is illegal, results in a gap between actual and potential revenue: the tax gap. A raise of tax rates will shift both the potential and the actual revenue curves upward[31], but the tax gap is likely to increase, because evasion will become more rewarding.

Figure 2.2 Relationship between administrative costs and tax revenue, with given tax rate and tax base



The extent to which actual tax collections approach potential tax yield can be termed *effectiveness* of tax administration, with 100% effectiveness meaning no evasion [Dean 1975, p. 12]. For the administration of subsidies and benefits, effectiveness can be defined in an analogous way as the extent to which (only) entitled parties fully receive their due. Apart from increasing efficiency (shifting the curve), greater effectiveness will require higher administrative costs (moving along the curve).

Several authors have tried to answer the question of how much a tax-administering agency should spend. Three reasons why discrepancies between tax

[31] When the tax rate reaches a high level, evasion or avoidance may actually lead to lower tax revenue: the apex of the Laffer curve has then been passed.

declarations and obligations should be minimised are often mentioned [e.g. Wertz 1979, pp. 144-146; Goode 1981, p. 251]. The first reason is fairness, which is an objective in itself. Secondly, successful evasion by some will encourage others, and may eventually erode the possibility to raise taxes at all. The third objective of enforcement is to produce additional revenue. Steuerle [1986, p. 34] adds that individuals and businesses evading taxes have a competitive advantage in the economy, which leads to an inefficient overall allocation of resources.

The third argument, additional tax revenue, is often presented as being based on an analogy with the theory of the firm. It is argued, then, that the tax collection budget is optimal when marginal costs equal marginal revenue. Although marginal costs and marginal revenue of tax collection efforts are extremely difficult to quantify, by general consent marginal revenue is considered to exceed marginal costs in almost every case (for a rare attempt at quantification, see Steuerle [1986, Ch.3]). Therefore, it is argued, the tax collection budget should be increased. However, this argument is based on the fallacy that tax revenue is part of the economy's output, instead of a mere transfer of money [Shoup 1969, p. 433]. In fact, administrative costs represent real resources being used up. If the analogy with the firm is to hold, marginal costs should be equated with marginal social benefits of increased compliance. This criterion is, of course, not very useful in practice[32]. Goode [1981] advocates the use of the simple marginal cost rule (marginal cost should equal marginal revenue) for the allocation of a given budget over different agency activities, although he acknowledges that this rule can cause neglect of low-revenue taxes and groups of taxpayers from whom it is difficult to collect additional tax. Correction of errors that lead to lower tax assessments would in this case stop altogether.

Fraud and errors are not the only reasons why amounts transferred between the public and the private sector are not as originally intended by the legislator. A related problem from which most social security programmes suffer is *non-take-up*: some individuals do not claim benefits they are entitled to. Non-take-up can be very high, especially for means-tested benefits. Not much information is available on this subject, however. Non-take-up of rent subsidy in the Netherlands has been estimated at no less than 55 per cent[33] [Van Oorschot and Kolkhuis Tanke 1989, p. 63]. Most research in this field has been done in the UK; non-take-up of means-tested benefits there can be as high as one-third or half of all those entitled to benefit[34]. The reasons behind non-take-up are complex and fall outside the scope

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[32] Slemrod and Yitzhaki [1987] give an interpretation of the benefit of increased enforcement in terms of the excess burden of evasion, caused by exposure of taxpayers to risk. See also Yitzhaki [1987].

[33] This doesn't mean that the intended number of recipients is 100/55 times the actual number, because approximately 12% of recipients do not qualify for rent subsidy, and thus receive this subsidy undeserved [Van Oorschot and Kolkhuis Tanke 1989, p. 61].

[34] See Fry and Stark [1993] for a recent comprehensive study of the take-up of means-tested benefits in the UK.

of this study[35]. It is clear, however, that administrative agencies can influence take-up in several ways, e.g. by the way they treat their clients and by the extent to which they inform and advise (potential) beneficiaries. Meade [1978, p. 304] argues that administrative costs of different forms of benefit programmes can only be compared at the same level of take-up, because a benefit with low take-up is one of low effectiveness. By analogy with the fight against tax evasion, the costs of finding additional claimants can be expected to rise at an increasing rate as take-up approaches 100 per cent. How much money should be spent on improving programme take-up can be decided by the marginal cost rule: marginal costs of increasing take-up should equal the marginal social benefit of higher take-up. Again, this rule is of little value in practice, because neither marginal costs nor marginal benefits are easy to determine.

Not only should the right amounts of money be transferred, this should also be done at minimal compliance costs. Administrative costs can be reduced by transferring costs to the private sector, e.g. by abolishing a free information service or tax phone for clients, or by imposing obligations on the private sector which makes the job of administrative agencies easier (e.g. PAYE). Obviously, a reduction of administrative costs achieved in this way is not always an improvement. In section 2.3.2 it is argued that shifting administrative costs to the private sector should only be allowed if on the whole considerable savings in operating costs result.

Effectiveness and level of compliance costs determine the quality of the work done by an administrative agency. In the end, the level of administrative costs should be judged against this quality level.

Productivity

A third determinant of administrative costs which may be influenced by policy measures is productivity. Productivity can be defined as the level of output per unit of input. The absolute level of productivity has little meaning; in order to investigate whether productivity is high or low, comparisons between different producers (static analysis) or comparisons over time (dynamic analysis) are in order. Variation in productivity can be attributed to:

- level of technical progress;
- scale of production;
- efficiency [De Groot and Goudriaan 1991, p. 24].

Technical progress may increase productivity. The production frontier shifts outward, which means that with a given amount of inputs more output can be produced, or that the same output can be produced with less inputs. For static comparisons, this factor can be left out of the analysis, but for comparisons over time it is essential. Not every industry profits from technical progress to the same degree. For the analysis of administrative costs of taxes and benefit programmes, the immense progress of computer technology is probably the most relevant trend.

Small producers often experience relatively high fixed costs. *Economies of scale* may reduce costs for large producers. On the other hand, large scale

[35] For an international review of the literature see Van Oorschot and Kolkhuis Tanke [1989].

producers suffer increasing costs of coordination and bureaucracy. Therefore, costs per unit of output are usually U-shaped. There is evidence that production in the public sector reacts rather inflexible to changes in demand. Goudriaan et al. [1989, p. 20] report rising costs per unit of output of services for which demand had fallen, and falling costs per unit of output of services for which demand had increased. In the same vein, Bauer [1988, p. 249] notes that temporary under- and over-staffing of tax departments results from variations in the number of taxpayers.

Efficiency of production consists of two parts. First, a given combination of resources should be used in a way that yields maximum output. Thus, no waste should take place. The relationship between maximum output and different combinations of inputs is depicted by the production function. Second, from all possible input bundles, the one with the lowest cost level should be chosen, given input prices. The scale of production and technical possibilities are considered given. It is possible, therefore, that individual producers are efficient, while total production is not, because a different scale of production would yield higher output with the same resources. Thus, responsibility for productivity lies with both national authorities and administrative agencies; the former may control the scale of production, while the latter are responsible for efficiency. Efficiency measures can be used to compare different producers, but comparisons over time are difficult to make, because efficiency gains can hardly be separated from technical progress[36].

In order to analyse its productivity, an organisation's outputs are related to its inputs. In the public sector, this is easier said than done[37]. The aims of many public departments are abstract, diverse and vague, and they change over time. Therefore, it is necessary to first identify a public department's major functions. Then inputs and outputs of each function must be identified and measured. Measuring output in the public sector is difficult, however, because typically, market prices for outputs are non-existent. In the National Accounts, public sector production is valued at production costs; relating costs to production defined this way is obviously pointless. We can, however, compare volumes of input and output. To do this, suitable measures of inputs and outputs must be found. Next, the necessary data must be gathered. Ultimately, inputs are confronted with outputs, and comparisons can be made between different periods or producers. Fortunately, market prices for inputs usually exist, thus volume measures of output may be related to production costs.

Because of many practical difficulties, productivity measurement has not, as yet, been applied to the public sector in very satisfactory ways. Measuring inputs or production costs poses many problems (see Chapter 3). Perhaps it is equally

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[36] Thiry and Tulkens [1989, pp. 35-38] describe two methods for decomposing productivity gains into technical progress and efficiency gains.

[37] Dean [1975, p. 185] identifies seven steps necessary to apply productivity measurement to a public sector function or department.

difficult to capture output in suitable measures[38]. Three kinds of output measures may be distinguished: throughput, output and outcome [Murray 1992, p. 525]. *Throughput* is related to the production process: it measures workload or intermediary products (e.g. the number of crimes reported to the police). *Output* measures the number of goods or services delivered (e.g. the number of crimes investigated). Whilst output is only a means to an end, *outcome* measures the final effect (in this example, safety from crime). Obviously, *outcome* would be the ideal measure, because that is what government intervention is all about. In order to be usable, output measures must fulfil three conditions: they must be *representative* of the activities of an organisation, they must be *quantifiable*, and they must be *homogenous*, i.e., comparable. Unfortunately, outcome measures which satisfy these conditions are rare, so, for practical purposes, usually output or throughput measures are used.

In the case of a tax administering agency, a much used output measure is tax revenue. Administrative costs of taxation are frequently expressed as a percentage of revenue: the cost ratio. However, tax revenue is influenced by many factors outside the control of the tax agency: tax structure (rates, allowances, exemptions), economic growth, inflation. If tax receipts are to indicate the output of a tax agency, they have to be adjusted for such factors. As an alternative, the number of tax assessments can be used, but this yardstick should be adjusted for changes in tax-exempt categories, plus the fact that assessments vary widely in complexity[39]. Less tangible outputs, like compliance encouragement, or fraud prevention, are even more difficult to measure. A yardstick to capture policy outcomes would be the extent to which a fair and economically neutral fiscal system would raise enough money to finance desired government action; obviously, such a measure is not practically feasible.

However imperfect, revenue (outlays) and number of assessments (recipients, applications handled) may be used as crude output measures of a tax (or benefit) administering agency. Using static analysis, efficiency of different agencies can be compared if corrections are made for differences in scale[40].

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[38] In the Netherlands, the Social and Cultural Planning Bureau (SCP) has pioneered this field [Goudriaan et al. 1986 and 1989]. See further De Groot and Goudriaan [1991]. SCP and the Instituut voor Onderzoek van Overheidsuitgaven (IOO) participate in a project to create a system of input and output measures of public departments, in order to monitor public sector productivity. The first report was published recently [De Groot et al. 1993]. Murray [1992] describes a comprehensive Swedish study which resembles the Dutch (SCP-) studies. For productivity measurement in the United Kingdom and the United States, see Levitt and Joyce [1988].

[39] At the same moment because of differences between taxpayers, and over time because of changing tax regulations. Moreover, output quality (accuracy of assessments) is thus left out of the analysis, as indeed is mostly the case in (public sector) productivity measurement [De Groot and Goudriaan 1991, p. 31].

[40] Zimmerman [1955] suggests using the cost ratio of the Syracuse sales tax as a benchmark for the costs of sales taxes in other regions. In Syracuse, administrative costs could be measured fairly accurately; moreover, the level of enforcement (an important quality measure) was quite

Dynamic analysis can be used to trace productivity trends. Differences in scale can then be ignored, as they are rather constant over (a short period of) time. However, if different countries are to be compared, corrections should be made to allow for such factors as inflation and economic growth[41].

The use of output measures which do not measure outcome is risky. As soon as output measures are used as *standards* by which the performance of organisations is judged, strategic behaviour is to be expected. Efforts of local managers will be directed towards producing as much *measured* output as possible, instead of trying to generate the desired policy outcomes. If, for example, a tax collecting agency is judged by the amount of revenue it collects, the incentive to correct mistakes of taxpayers which result in too high payments will be nil. The unfortunate history of (the former) centrally planned economies abounds with interesting examples of mismanagement induced by output standards[42]. Moreover, once a variable, which has not been carefully defined, is monitored systematically, it invites strategic manipulation: unemployment, for example, may be reduced artificially by redefining groups of unemployed as pensioners, or disabled workers. All this implies that output measures to be used for policy purposes should be selected very carefully, evaluated regularly, and if necessary replaced.

To summarise: administrative costs are (too) high, if existing regulations are unnecessarily complex, if productivity is less than optimal, or if the administrative agency maintains a quality level that is higher than desired at its cost. Administrative costs are too low, if part of total operating costs has been shifted to the private sector without a considerable reduction in operating costs, or if too little is spent on the quality of administration. A too high level of administrative costs results in an unnecessarily high level of taxes or social security contributions, and thus to unnecessarily high excess burdens.

2.2 Compliance costs

2.2.1 Definition

Compliance costs may be defined as the costs of complying with regulations related to tax-benefit programmes. In principle, they include the costs incurred by the public sector in its capacity of taxpayer or withholding agent, but as these costs fall outside the scope of this study (see section 1.3.1), compliance costs here are confined to private sector costs made in order to operate the tax-benefit system.

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high. Differences in scale are ignored, however.

[41] In a series of articles, Heyndels and Vuchelen [1987, 1988, 1989a, 1989b] analyse the productivity of tax collection in this way, using tax revenue and number of assessments as output measures.

[42] See e.g. De Kort [1994].

Compliance costs are not limited to cash outlays. They include time spent by private households, and psychological costs: anxiety and sleepless nights caused by obligations imposed on individuals by the tax-benefit system. Although this definition of compliance costs seems straightforward enough, there has been some discussion on the precise meaning of the concept.

Johnston [1963] makes a distinction between *unavoidable* and *avoidable costs*. Unavoidable (imposed, non-discretionary, mandatory) costs are those necessarily incurred in order to comply with legal requirements; avoidable (voluntary, discretionary) costs are, for example, tax planning costs made in order to minimise one's tax bill, or to maximise subsidy receipts. It has been argued that this distinction should be made and that avoidable costs should not be included in compliance costs (see e.g. Dean [1975, pp. 19-20]; Meade [1978, p. 487] and Pope et al. [1990, p. 8]). The avoidable/unavoidable dichotomy raises some nasty problems, however. In practice, it proves difficult to separate both cost categories. But even if this were possible, such a distinction has in itself little value. For example, claiming tax allowances or evaluating the tax outcomes of certain business transactions would be voluntary acts, their costs not to be included in compliance costs. However, it is hard to see such activities as other than an essential part of compliance. After all, no one is obliged to claim a benefit or subsidy, which would as the ultimate consequence imply that compliance costs of benefit or subsidy programmes do not exist! Sandford et al. [1989, p. 12] suggest a concept such as that of the lawyer: 'the costs which a reasonable man would incur'. Apart from this being a rather vague criterion, it is difficult to see why a distinction between avoidable and unavoidable costs should be made at all. Both are the result of the existence of the tax-benefit system. If the costs of this system are to be estimated, surely both categories should be included.

A different problem is the attribution to specific taxes or benefit programmes of costs which are *shared* with other business functions (*joint cost problem*). A similar problem arises in the case of administrative costs. Yocum [1961, pp. 37-38] discusses whether time spent in sales tax formalities by a sales clerk represents a cost to the retailer. It can be argued that few, if any, sales clerks are kept busy 100 per cent of their working time. For some part of the time anyhow, they will be just standing around, so that sales tax work can be done in 'idle 'time. Yocum rejects such reasoning, however, on the ground that any non-selling time ought to be used for the benefit of the store (e.g. stock-keeping, freshening displays). Johnston [1963, p. 8] reaches the same conclusion by assuming that firms are at optimum employment, which means that any amount of time spent on tax work represents a real cost. Johnston defines tax compliance costs as the reduction in a corporation's operating costs - exclusive of the tax itself - which would result if the tax were eliminated. Those costs which would continue to be made in the absence of the tax cannot be compliance costs. The consequence of this approach is that most overhead costs for shared facilities, such as housing costs, are excluded. IFO [1953, p. 154] uses this principle to calculate a 'minimum estimate' of compliance costs to businesses. Yocum [1961, pp. 74-75] rejects this point of view. He maintains that part of the overhead expense is incurred to facilitate tax compliance

and that therefore a proportionate share of the overhead should count as compliance costs.

The issue hinges on whether compliance work increases a firm's operating costs, or simply results in a more intensive use of existing facilities. This in turn will depend on the degree of capacity utilisation and on the scale on which (additional) production factors can be engaged or put off. Such factors will vary among firms. The 'marginalistic' concept of compliance costs advocated by Johnston has its flaws. Take for instance compliance work imposed on employers by wage tax and social security contributions. Most of the work for both levies will be done simultaneously. If only costs incurred solely for one of these levies were measured, and tasks performed for their joint collection were excluded, the results would be absurd [Dean 1975, p. 102]. Yet a similar procedure was applied by Neuhoff [1969], who estimated the compliance costs of social security contributions and some other regulations by treating these costs as additional to the compliance costs of wage tax, which were considered given. At best, such estimates can be used as lower limits, but there is no saying by how much true costs are underestimated. Schmidt [1968] estimated the compliance costs of the newly introduced VAT in former Western Germany by measuring the increase in costs following its introduction in 1968. Snijder [1981] estimated the time spent on VAT work by having the daily bookkeeping of eighteen small and medium-sized firms done twice: once including VAT requirements and once without.

It is difficult what to make of this discussion. The treatment of compliance work as marginal or additional is remote from actual business experience, where compliance is an integral function of the firm [Dean 1975, p. 102]. Compliance work is part of everyday routines. Dean [1975, p. 103] therefore suggests an alternative definition of compliance costs as *'all those extra costs which the entrepreneur must budget for simply in order to comply with tax requirements'*. These are the costs that would not have been incurred in the absence of a tax (or benefit programme). This definition is used here. In hiring staff and in renting accommodation, the entrepreneur will be conscious of the requirements caused by compliance. A proportionate part of the costs incurred should, therefore, be assigned to the relevant tax or benefit programmes.

In practice, however, compliance costs according to this definition are not easily determined. Hence, estimates based on this definition as a rough guideline are the best we can produce. The whole discussion is largely academic, however, because the measurement of compliance costs, like the measurement of administrative costs, is such a complicated affair. As a result, error margins are considerable (see Chapter 3). Striving for a high level of sophistication at defining the exact borders of compliance costs is, therefore, a rather futile effort.

Yet another problem is related to the fact that, apart from regular costs, there are *commencement* and *temporary* costs of compliance, caused by legislative changes or the introduction of new taxes or benefit programmes. This problem is similar to the one existing in the case of administrative costs, which was dealt with in section 2.1.1. There, we concluded that temporary costs are an integral part of total operating costs, because of the frequency of legislative changes.

2.2.2 Factors determining compliance costs

Many determinants of administrative costs also influence the level of compliance costs, but the point of view may differ widely, which in turn may have important implications. Again, we make a distinction between exogenous and endogenous determinants, depending on whether they are under the control of the individual or organisation involved, or not.

Exogenous determinants

Obviously, the *design* of a tax or benefit programme has its bearing on the level of compliance costs. Complexity of regulations may increase the costs of compliance. More time is needed to learn about complex regulations. Compliance costs increase with the number of factors that have to be taken into account, the difficulty with which these factors are to ascertain, the required degree of certainty and the frequency with which these factors are to be ascertained. However, there are cases where increased complexity can actually reduce compliance costs. As shown in section 2.2.1, making it easier for taxpayers to claim an allowance may encourage more individuals to claim, resulting in higher compliance (and administrative) costs. Increased complexity may stimulate non-compliance with rules that cause particularly high compliance costs, and thus reduce overall compliance costs (compare Burgess [1992, p. 392]).

Legislative changes cause temporary adjustment costs; this has already been indicated in section 2.2.1. As is the case with respect to administrative costs, *technical progress*, especially the automation revolution, has increased productivity, and thus reduced compliance costs of certain programmes[43].

Scale is also an important determinant of both administrative and compliance costs. The results of earlier research (mostly concerning firms) indicate that compliance costs fall with disproportionate severity on the small. There seem to be considerable returns to scale. Fixed costs are relatively high, while variable costs are low or moderate. Keeping up with legislative changes, for example, is relatively expensive for small firms. Often the same forms have to be filled in, independent of firm size. Big firms can spread such costs over a larger turnover. Moreover, they can employ experts who do compliance work more efficiently. In small firms, it is often the entrepreneur himself, whose time is relatively expensive, who is burdened with compliance work.

Although there is no dispute that compliance costs related to turnover or number of employees are on average higher for small firms than for large ones, there is also evidence that these costs are much more variable for small firms. Sommers and Cole [1981] (USA) and Hunkeler [1985] (Switzerland) conclude that the variation of compliance costs of government requirements in general (not just regarding taxes and benefit programmes) generally decreases with firm size.

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[43] On the other hand, because of the increased availability of computers, public authorities may feel free to increase administrative burdens, especially for firms.

Empirically, their case is not too strong, however[44]. Moreover, both studies consider costs of government requirements in general. It isn't obvious whether the results hold in the case of compliance costs of tax-benefit programmes.

Three reasons are given why compliance costs of small firms are likely to show greater variation. Small firms usually don't have employees who are solely employed with compliance work. Often their accounting system will be less extensive. The result might be that cost figures for small firms are less reliable, and, therefore, show greater variation. A second reason is that small firms differ more in their administrative obligations. For example, firms without employees don't have to collect wage tax, and firms under the registration threshold are not burdened with VAT. In the third place, small firms stand a better chance to escape detection or enforcement actions by the authorities if they don't comply. The sheer number of small firms makes it impossible to control them all effectively, and their small size hardly makes it worth while either. Possibly some firms succeed in reducing compliance costs this way. On the other hand, if detected and prosecuted, a small firm will have more trouble defending itself than a bigger firm which can afford better legal counsel. This may prevent some firms from non-compliance. Such cross pressures are likely to result in much individual variation in the level of compliance costs for small firms. The same might be the case with individuals; taxpayers with low income and relatively simple tax affairs are not likely to be controlled very thoroughly, but, in contrast with firms, they usually don't have much opportunity to take advantage of this position.

There is some evidence that evasion is more widespread among small firms than among larger ones. Findings of a survey of 501 firms in the Netherlands suggest that small firms have a less negative attitude towards dishonesty in reporting income to the tax authorities than larger firms [Veldkamp 1990, p. 22 and 66-67][45]. Moreover, small firms mistrust the Tax and Customs Administration significantly more often than do larger firms. One may assume that a greater willingness to evade taxes is likely to be matched by a greater willingness to dodge compliance work.

In Chapter 5 of this book, the hypotheses, that small firms are relatively heavily burdened with compliance costs of tax and benefit programmes, and that their compliance costs show greater variation, are tested for the Netherlands.

A factor which has both exogenous and endogenous elements is *case complexity*. A taxpayer claiming allowances and a national assistance recipient with a complicated domestic situation incur relatively high compliance costs. Earlier

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[44] Sommers and Cole use an F-test to determine the significance of the difference in variances, which depends heavily on the assumption of normality, while the distribution of compliance costs is far from normal. Hunkeler's conclusion is based on a scatter diagram; she doesn't test the significance of the difference in variation. Moreover, sample sizes in both studies are relatively small.

[45] Respondents were asked what proportion of firms in their size class and economic activity would show certain types of behaviour. The replies were used as estimates of the actual behaviour of firms. Even this indirect way of questioning was too threatening for one third of respondents, who refused to answer.

research shows that the self-employed are relatively heavily burdened (e.g. Sandford [1973] or Slemrod and Sorum [1984a or 1984b]; see appendix B).

Endogenous determinants
Like the public administration, individuals and organisations have two options to control the costs caused by taxes and benefits: by choosing what to do and by deciding how to do it.

Although following from legal requirements, the level of compliance costs can be influenced by those who incur them. In the first place, some compliance costs are made *voluntarily*. No obligation exists to minimise tax payments by claiming every possible deduction, for example. Firms will differ in their tax-planning efforts. Homo economicus would increase such activities until marginal compliance costs equal marginal tax savings, or marginal benefit or subsidy increases.

Then, there are compliance costs which can be reduced simply by *non-compliance*. As we have seen above, there is some evidence that small firms have considerable scope for evasion of compliance activities.

Apart from the degree of compliance, the degree of *efficiency* determines compliance costs. In the private sector, the incentive to maximise efficiency is stronger than in the public sector. Firms must operate efficiently or risk being pushed out of business by competitors, while individuals will always try to keep costs at a minimum because they themselves will have to bear them.

2.2.3 The optimal level of compliance costs

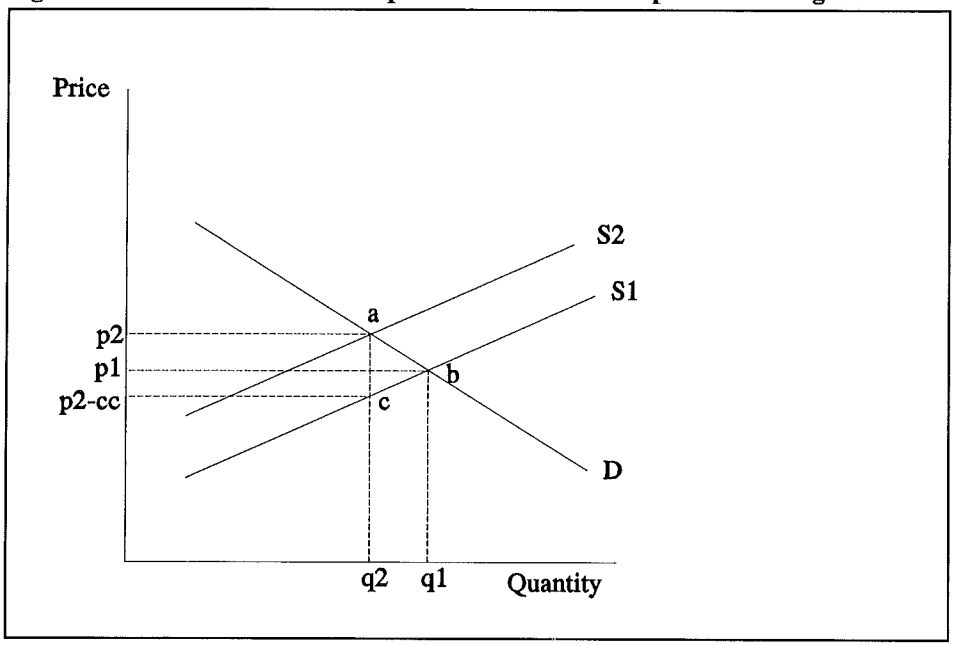
In section 2.1.3, the (implicit) criterion, used to judge the level of administrative costs, was that costs should not be higher than necessary, because, otherwise scarce resources would be wasted. The same holds true for compliance costs, of course. However, besides using up scarce resources, administrative and compliance costs both generate an excess burden on the economy. The case of the excess burden of taxation, from which administrative costs are paid, is well covered in the literature (see section 1.1.2). This can not be said of the case of compliance costs. Therefore, we elaborate on this subject here. First, we show how compliance costs change relative prices and thus lead to inefficient allocation. Then, we discuss several negative effects of compliance costs on the economy:

- distortion of competition, because compliance costs are regressive;
- avoidance of economic activities which bring along compliance costs;
- reduced international competitiveness.

Welfare costs of compliance
The welfare costs of compliance consist of compliance cost plus additional efficiency losses. The *excess burden of compliance costs* may be analysed in the same way as the excess burden of taxation (see section 1.1.2). Just like taxes, compliance costs lead to an excess burden when they change relative prices and thus distort economic allocation. Figure 2.3 shows the case of a tax-benefit

programme causing compliance costs for producers of good X. In practice, this good may be interpreted as a group of products for which production costs include costs of compliance with a tax or benefit programme, e.g. labour-intensively produced goods, the prices of which reflect compliance costs related to payroll taxes. Before introduction of the programme, market equilibrium is determined at the point b where supply curve S_1 and demand curve D intersect. A quantity of q_1 is sold at price p_1. Now a tax or benefit programme with associated compliance costs is introduced. This makes the supply curve shift upward to S_2. A new market equilibrium is reached at the point a, where a smaller quantity q_2 is sold at a higher price p_2. The producers only receive p_2 minus the compliance costs per unit of good X, however (p_2-cc). The consumers' surplus is reduced by p_2abp_1; suppliers lose p_1bcp_2-cc. The loss in economic surplus is equal to p_2abcp_2-cc, the sum of the consumers' and producers' surplus. This loss in surplus consists of compliance costs (p_2acp_2-cc) and an excess burden (abc). Had the shift of the supply curve to S_2 been caused by a tax on good X, then p_2acp_2-cc would have been a *transfer* to the government in the form of tax revenue, which could have been spent on the provision of public goods or transfers to the private sector. Provided this money would be spent in a way that yields the same utility as spending it on good X, the welfare loss would be restricted to abc. Now, the area p_2acp_2-cc represents compliance costs: real resources that have been used up and cannot be spent again. Therefore, the entire loss in economic surplus p_2abcp_2-cc, instead of only abc, now represents a cost to the economy.

Figure 2.3 Excess burden of compliance costs related to production of good X



Distortion of competition

It is often assumed that compliance costs are passed on to consumers as part of total production costs. In fact, this will happen only if compliance costs per unit of output are approximately the same for different producers. The available empirical evidence, however, points the other way: compliance costs increase with firm size, but measured as a proportion of output or sales they tend to fall with size. There are considerable economies of scale in complying with tax and benefit regulations. Thus, the compliance burden is distributed like that of an excise tax, with the rate declining with firm size.

Figure 2.4 The changing relationship between firm size and average costs, due to compliance costs, in a market where firms of different size operate

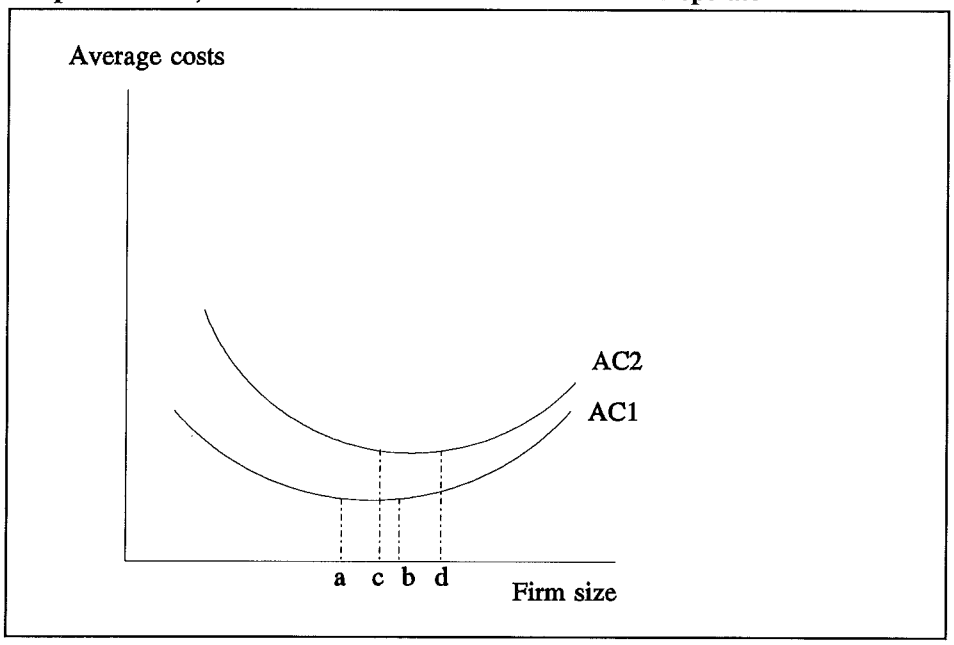


Figure 2.4 demonstrates how this affects the average cost curve in a market where firms of different sizes operate[46]. Before introduction of a programme, the average cost curve is depicted by AC_1. It is assumed that the range ab represents firm sizes which are able to compete in this market. Now a tax or benefit programme is introduced, which causes compliance costs to firms. The regressive nature of compliance costs will shift the average cost curve upward, to AC_2. The minimum of the curve shifts to the right: optimal firm size increases. As a result, firms smaller than c will have great difficulty competing against larger firms. If they would pass on their compliance costs to consumers completely, they would be

[46] Similar figures may be found in Berney [1980, p. 5] and Berney and Swanson [1982, p. 17].

pushed out of the market. They may stay in the market only if they are prepared to accept lower profits, work harder, and thus bear part of the compliance costs themselves. As a result, profit margins of small firms are squeezed and their long-run viability is endangered. Thus, the regressive impact of the compliance costs of taxes and benefits will probably stimulate economic concentration. Given the importance of small firms for innovation, employment generation and competition[47], society certainly must pay a price, in addition to compliance costs themselves.

Avoidance
Yet another effect is, that like taxation, high compliance costs may result in avoidance of situations where compliance is required. Thus, even compliance costs that are *not* made may have an adverse influence on the economy by discouraging valuable activities. For example, a retailer may withdraw a particular line of products which carry a non-standard VAT rate in order to reduce compliance costs[48]. This results in consumers loosing a source of supply, and competition is reduced. Small firms which use relatively few inputs subject to VAT may wish to remain under the registration threshold in order to escape VAT compliance costs altogether. Self-employed persons, not yet employing others, may be reluctant to do so because of PAYE and social security regulations. Compliance costs may also discourage people from starting up a new business. The high costs of learning how to comply with a wide array of government regulations might prove an effective additional barrier to entry, especially for individuals who are currently in employment, with relatively low compliance costs.

International competitiveness
Finally, relatively high compliance costs may put the national economy at a competitive disadvantage vis-à-vis other countries. A comparatively high price level will hamper exports, and high compliance costs may discourage foreign enterprises to invest or set up subsidiaries.

Summarising, apart from resources used up, compliance costs may have many other detrimental effects on the economy. All such costs should be weighted carefully against the benefits of the tax-benefit programmes which generate them.

The amount of indirect costs caused by compliance is obviously extremely difficult to quantify. No published estimates are known to the author.

2.2.4 Offsetting benefits to compliance costs

Compliance with government regulations concerning taxes or benefit programmes does not only generate costs; there are benefits as well. A real offsetting benefit is

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[47] See e.g. Bannock [1981] or OECD [1985].

[48] This happened in the UK [Sandford et al. 1989, p. 19].

the general improvement of administrations of firms and individuals that may result from compliance requirements. Benefits to those who incur compliance costs, but not to society as a whole, may arise from the temporary use of funds by those who collect taxes or social security contributions from third parties (e.g. employers). Moreover, certain compliance costs are deductible from taxable profits.

Improved record-keeping

In order to meet legislative requirements related to taxes and other transfers, some firms and individuals may keep better or more extensive records than they would have done otherwise. Especially small and medium-sized firms are likely to benefit from this. Firms subject to VAT are obliged to keep accounts of every purchase and sale; in doing so, it may also help them to keep a better eye on expenses and improve stock control. In the Netherlands, the Sickness Benefits Act compels employers to keep track of absenteeism, which may indicate unpleasant or dangerous work conditions. Individual taxpayers may well profit from the fact that they are forced to make an annual account of their financial affairs. In order to assess *net* compliance costs, compliance benefits should be quantified and subtracted from gross costs. Unfortunately, the value of compliance benefits seems difficult to estimate. The only estimate known to the author is made by Sandford et al. [1981, pp. 105-107]. In a sample of British firms, a small minority was able to put a value on the benefit of improved record-keeping due to VAT; based on this data an upper limit of such benefits was calculated at 15 per cent of the compliance costs of VAT.

Cash flow benefits

When taxes or social security contributions are collected by third parties (e.g. employers collecting payroll taxes), there is usually a time interval between the moment of collection and the moment of payment to the tax or social security authorities. If collection precedes payment, the collector has the use of the collected funds for some time. This is equivalent to an interest-free loan. If payment precedes collection (e.g. for VAT repayment traders[49]), the collecting firm suffers a loss. Cash flow benefits represent an offset to compliance costs for firms collecting taxes or social security contributions from third parties, but not for society as a whole, because benefits for firms equal losses to the tax or social security authorities.

The literature on compliance costs pays little attention to cash flow benefits. Exceptions are the studies by Sandford and others at the University of Bath[50]. The *size* of the cash flow benefit will depend on the amount of taxes and contributions collected and on the period of time which elapses between collection and payment.

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[49] For VAT repayment traders, the amount of VAT paid to suppliers exceeds the amount of VAT collected from customers, e.g. because they use high-rated inputs, while they mainly sell products that are low-rated (or, in some countries, even zero-rated). They receive the difference between VAT paid and VAT collected as a refund from the revenue authorities.

[50] For an extensive discussion of cash flow benefits see Sandford et al. [1981, pp. 75-89] or Sandford et al. [1989, pp. 39-47].

The *value* of this benefit depends on the relevant interest rate. This may be the short-term bank interest rate for firms which lend out cash flow benefits, or the overdraft rate for firms which use the extra cash to reduce their bank debts. There are many rates of interest, depending among other things on size and term to maturity of the loan. Here, the average of one month and three month inter-bank rates has been chosen. A more sophisticated approach (e.g. different rates according to size of cash flow benefit and length of loan) might create a false sense of precision; interest rates vary considerably over time anyway, and in order to estimate the size of cash flow benefits, several rather arbitrary assumptions must be made (see appendix A2). Thus, estimates of the value of the cash flow benefit can give no more than rough indications of the order of magnitude of offsetting benefits to compliance costs, or the extra costs in the case of advance tax payments.

Tax deductible expenses
Compliance costs incurred by firms will reduce profits and, therefore, tax payments. Thus part of the compliance costs is eventually borne by the public treasury. Not all components of compliance costs are directly related to taxable profit, however. The case of money costs (including paid labour) is clear cut: these reduce profits by the same amount. The case of time costs is less clear. The effect on profits will depend on whether time spent by the owner/manager or spouse on compliance work would otherwise have been spent on work or leisure. Some assumption must be made here; a conservative estimate would exclude time costs altogether. The amount of taxes saved depends on the relevant tax rate. This in turn depends on the legal form of the firm and on profits. In this study a tax rate on profits of 40 per cent is taken as a rough approximation[51]. A more sophisticated approach might be misleading, because the reduction of taxable profits caused by compliance costs can only roughly be estimated. Moreover, while the legal form of most of the firms in our sample is known, their profits are not. For small firms, this is often their best kept secret.

2.3 Relationship between administrative and compliance costs

2.3.1 Trade-off between administrative and compliance costs

As we have seen, the costs of operating a tax-benefit system are divided between the public and the private sectors of the economy. The distribution of operating costs over both sectors is not fixed, however: some costs can be shifted between the public and the private sector. Who actually pays the bill depends on the relevant legislation and other circumstances. An interesting example is described by Thompson [1961]. In the 1930s, evasion of gasoline taxes in the United States reached such a level that legitimate marketers selling taxed motor fuel could hardly

[51] In the year to which the results of our business survey apply (1989), personal income tax had marginal rates between 16 and 72 per cent. Corporation income tax had marginal rates of 40 and 35 per cent, respectively.

survive. As a matter of self-preservation, the petroleum industry undertook to assist the states in enforcing the gasoline tax laws and collecting the full amount of the tax. In 1934, the petroleum industry spent $84,000 in New Jersey alone to collect an extra $700,000 of gasoline tax. Impressed by this success, the state of New Jersey decided to employ the staff of the Petroleum Industry Tax Evasion Committee itself. Although this example of an industry actively cooperating in administering a tax on its own product is probably unique, it serves to demonstrate that the split-up between administrative costs and compliance costs is not fixed. Costs can be shifted from the public sector to the private sector and back. This was already recognised by Haig [1935, pp. 327-328], who found some evidence of an inverse relationship between administrative and compliance costs: taxes that are relatively cheap to administer cause high compliance costs, and vice versa.

The trade-off between administrative and compliance cost is found at several levels (compare Dean [1975, p. 27]): assessment of amount to be transferred (tax liability, subsidy, benefit), collection or payment, information and control, and customer service. In order to collect taxes or to pay subsidies or benefits, administrative bodies demand information from tax payers or benefit recipients. In some tax systems, taxpayers are required to give this information in the form of a tax assessment (and pay straight away). This self-assessment system is used for personal income taxation in the USA. Compliance costs are likely to be higher (and administrative costs lower) than in systems which merely require taxpayers to supply the relevant information, as is the case under the Dutch personal income tax system.

A second way of transferring costs from the public sector to the private sector is by using third parties. In the Netherlands, rent subsidy is generally paid through the landlord (private landlord or housing association), who receives a compensation for his additional costs. In the case of taxes, third parties may be used for collection or payment. In the first case, tax is withheld or deducted at source. In the Netherlands, payroll taxes and dividend tax are withheld by employers and companies from employees and shareholders, respectively. In the second case, the tax is not paid by the intended taxpayer, but by a third party, who recaptures the tax by increasing his prices (VAT, excises). When third parties are used, administrative costs are relatively low, because of the drastic reduction of points where tax is collected. However, the costs for the private sector may be considerable, and are usually not compensated for by the tax authorities.

In order to collect taxes or to pay subsidies and benefits, administrative agents need a certain amount of information. By imposing the obligation to supply more information, costs can again be shifted from the public to the private sector. An example is the obligation of banks in the Netherlands to report interest payments to clients (*renterenseignering*, effective as from 1988), or unusually large cash transactions (as from 1994).

Finally, service to 'customers' (taxpayers, benefit recipients) is an important instrument to reduce private sector costs at the expense of the public sector. This can take many different forms: providing free information (e.g. through a 'tax phone'), distributing leaflets, helping taxpayers prepare their return, keeping waiting queues short, etc.

Aside from a trade-off between administrative costs and compliance costs, an increase in one cost category may induce an increase in the other. For example, more tax audits will increase costs for both the tax office and taxpayers. The same thing happens when more taxpayers claim deductions.

2.3.2 How should operating costs be distributed?

When operating costs of tax-benefit programmes can, at least in part, be shifted between the public and the private sector, the question which then arises is, which costs should be borne by the public sector and which costs should be imposed on the private sector. In the literature, it is generally acknowledged that operating costs should only be shifted from the public to the private sector if overall cost savings are considerable (e.g. Meade [1978, p. 491], Sandford et al. [1989, p. 203]). There are several reasons for this. In the first place, public sector costs can be distributed over tax payers in a way that is considered fair. Compliance costs may fall with disproportionate severity on certain groups, e.g small firms, and thus reduce economic efficiency more than a slightly higher overall tax level (the consequence of higher administrative costs) would. Second, public resistance can be expected to be higher against compliance costs, which may undermine the willingness to comply. Third, administrative costs are more visible. Transfers of costs to the private sector will erode the awareness of total operating costs by public authorities and political decision makers. Thus, there is a strong case to be made for locating operating costs within the public sector as much as possible; only if efficiency gains substantially outweigh the economic and social costs of burdening the private sector with compliance costs may this rule be bent.

3

Measurement of operating costs

This chapter deals with measurement issues. After a brief discussion of methodological criteria, different methods to determine the operating costs of tax-benefit programmes are described. Finally, problems related to the valuation of certain cost items are considered.

3.1 On methodology

Before turning to methods to estimate operating costs, the methodological conditions such methods must fulfil should be briefly considered. The conditions are validity, reliability and representativeness.

A research method is *valid* if one really measures what one intends to measure. A theoretical concept, like 'compliance costs', cannot be measured directly. First, it must be made operational, that is, it must be translated into something measurable. This is done by defining the theoretical concept in measurable units, like the amount of time reportedly spent by taxpayers filing their returns. The condition of validity means that the operational definition should match the theoretical concept as closely as possible. If, for example, the occurrence of tax evasion would be measured by simply asking a sample of taxpayers if they evade taxes, what would actually be measured would not be the occurrence of tax evasion, but, more likely, the strength of the social taboo on tax evasion.

Reliability is the degree to which the relevant variable is measured correctly. If repeated measurements yield (approximately) the same result, their reliability is considered to be satisfactory. In order to make this test possible, the researcher should report systematically what procedures he has followed. Other researchers should be able to reproduce the results by repeating the measurement in exactly the same fashion. If data from external sources are used, reliability may be difficult to assess, especially if several sources have been tapped.

Often, only a sample is studied instead of an entire population. The results of sample measurements are then used to estimate variables in the population. For a correct procedure, the sample must be *representative* of the population, that is, there should be no difference between the sample and the population with respect to the variables under study. Obviously, representativeness cannot be tested directly, because data with respect to the entire population are not available. If they were, using a sample would be unnecessary. However, other variables on which data are available may be used to test for representativeness; preferably variables which may be expected to be related to the variables studied.

3.2 Research methods

Several methods are available to study operating costs, but no single method is superior. The choice of a method, or a combination of methods, will depend on the circumstances and on the available resources. Here we discuss the pros and cons of five such research methods: analysis of existing documents, case studies, surveys, diary studies and models.

3.2.1 Documentary research

Administrative costs
The most important sources of information about administrative cost are various government documents. Unlike similar data on spending by firms, data on government outlays are usually available to the public. Public agencies administering tax or benefit programmes may publish annual reports which contain information on their administrative outlays. Spending by government departments can be traced to a certain extent in official publications. Unfortunately, the form in which public agencies present financial data is not always appropriate for the intended analysis, as their publications are usually not specifically meant for that purpose.

The most obvious source is the annual government budget. It will usually contain a survey of expenditures in previous years and expected expenditures in the next few years. If all government expenditures are accounted for, surely administrative costs are easily identified? The answer is no, unfortunately[52]. In the first place, government budgets do not specify outlays on a very detailed level, say, expenditures made in order to operate a specific subsidy programme. Generally speaking, the level of aggregation is too high for this purpose.

A more fundamental problem is that costs are usually not related to output. Costs may be classified in three ways: they may be related to input (cost components), the production process (cost centres), or output (cost units).

Cost components are the inputs of the production process. A classification based on cost components may specify staff costs, cost of housing, etc. *Cost centres* are functional departments of an organisation, like an accounting department, or a works canteen. In the Dutch government budget, administrative expenditures are classified at a rather high level of aggregation: by cost centres or groups of cost centres ('main policy areas'), with an additional breakdown into two cost components: staff costs and material costs [Van den Bent 1989, p. 31]. If a department is occupied exclusively with the administration of a particular tax or benefit programme, the costs of the cost centre will be the administrative costs of the programme concerned. Usually, this will not be the case; what we really need is a classification according to *cost units*.

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[52] See also Hermans [1992, Ch.3]. She describes the difficulties encountered when using government budgets for the study of management costs of health services.

Cost units are outputs of the production process to which costs of inputs and production are attributed. In the Netherlands, the Government Accounts Act (*Comptabiliteitswet 1976*, article 4) prescribes that, whenever feasible and useful, budget sections should have annexes in which outputs, in physical measures, are related to costs (see Chapter 1). This annex is called *output budget (prestatiebegroting)*. Unfortunately, such output budgets are presented in a limited number of cases only [Algemene Rekenkamer 1988b]. Moreover, even when used, they sometimes contain only output figures, without related costs. The reason is lack of interest shown by ministries and parliament alike [Algemene Rekenkamer 1988b, pp. 12-13], and a great number of difficulties related to cost attribution. This brings us to the next fundamental problem of government budgets with respect to the study of administrative costs: they are based on *expenditures*, not *costs*.

There are four ways to organise government budgets, depending on the moment when expenditures (or revenues) are taken into account [Koopmans et al. 1991, pp. 42-46; Van den Bent 1989, pp. 27-29; Van der Bij 1993, Ch. 4]. Table 3.1 summarises the main characteristics of each way to organise governments budgets. Each approach ties in with a different stage of transactions: the contract or purchase order, delivery, payment, and consumption, respectively. In *obligations-based budgets (verplichtingenstelsel)*, outlays are recorded at the moment obligations are incurred. An obligations based-budget specifies the amount to which the government may incur liabilities. An *accrued-expenditures-based budget (stelsel van verkregen rechten)* will record outlays at the moment of delivery of goods and services to which expenditures apply. At this moment, a claim to payment arises. A *cash-based budget (kasstelsel)* recognises outlays at the moment of payment, that is, when cash is actually disbursed. The three approaches mentioned so far only record *expenditures*. What we are after, however, is *costs*. Costs are the resources used up for a specific purpose. They include both current expenses and proportions of former capital expenditures, according to the lifetime of the acquired capital (depreciation). Spending on this basis is recorded in *cost-based budgets (stelsel van baten en lasten)*. If costs can be related to output (cost units), unit costs may be calculated. This approach may be compared with the determination of profits of firms (cost accounting). In order to sell at a profit, a firm will have to calculate production costs of particular products.

Table 3.1 Ways to organise the government budget

Basis	Moment of recording	Transaction stage
Obligations basis	Moment an obligation is incurred	Contract, order
Accrued-expenditures basis	Moment a claim to payment arises	Delivery
Cash basis	Moment of cash disbursement	Payment
Cost basis	Period of use	Consumption

None of the four ways to organise the budget is in itself superior. The final choice depends on the purpose of the budget. In the Netherlands, the budget of the central government is on a mixed cash-obligations basis. This allows Parliament a

maximum of control over the amount of outlays the government is authorised to make, and also to control the extent to which liabilities incurred in the fiscal year will lead to expenditures in later years. Budgets of municipalities and provinces are on a cost basis.

For a study of administrative costs, the choice of a cash-obligations based budget is an unfortunate one. Instead of costs, the budget records cash outlays actually made within the fiscal year, in tandem with newly incurred obligations. The costs to be attributed to the fiscal year do not directly follow from this. No distinction is made between current costs and capital expenditures. Therefore, annual expenditure figures are not readily comparable: they are distorted when capital expenditures vary between years (which will normally be the case) and when the amount of payments deferred to later fiscal years is variable. Moreover, expenditures are not related to outputs, except in the few cases where also a (full) output budget is produced. This means that, in order to arrive at annual cost figures, more information is needed than the central government budget has on offer.

Even where accounting is said to be on a cost basis, caution is needed. Annual reports of administrative agencies which administer social insurances may be nominally on a cost basis (industrial insurance boards, Social Insurance Council), but sometimes capital expenditures are nevertheless fully booked as costs in the year of payment.

Usually, additional information is hard to come by, which means that expenditures may have to be used as a rough approximation of costs. Although expenditures differ from costs, in many cases the error margin would seem to be acceptable, because labour costs make up a very large part of total administrative costs[53]. Wages are usually paid within the fiscal year, and distortions caused by variation in capital expenditures are limited because of their relatively modest share in total costs. In line with common parlance, in the remainder of this book, the word 'costs' is sometimes used when actually 'expenditures' are meant.

Compliance costs

In a few cases, compliance costs have been estimated using data from existing records. The advantage here is in the reliable factual base. Unfortunately, such documentary evidence as is available is mostly insufficient to estimate compliance costs.

In the Netherlands, a sample of accounting, administration and bookkeeping offices, working for small and medium-sized businesses, provided information on the costs of VAT and payroll tax work contracted out to them [EIM 1970]. Compliance costs of work not contracted out remained outside the scope of this study. Sandford and Morrissey [1985] estimated the compliance costs of the Irish wealth tax employing file records of a large firm of accountants, which served 5-6 per cent of all individual wealth tax payers. Pitt and Slemrod [1988] inferred the

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[53] Labour costs of tax collection in W-Germany make up 85% of total administrative costs [Bauer 1988, p. 178]. Sandford [1973, p. 7] mentions the same figure for the UK Inland Revenue. See also the empirical chapters of this study.

costs of itemising deductions from taxable income from data in the 1982 US Treasury Tax File. These data suggest that some taxpayers would save money by itemising, but that they opt not to do so. These authors postulate that such taxpayers refrain from itemising, because the compliance costs would exceed the tax saving that could be obtained (see section 3.3.4).

Concluding, the advantages of documentary research are the relatively short time period needed, the possibility to compare data from different sources (if available), and the reliability of the factual data. Disadvantages are limited availability, the difficulty to assess the quality of the data, and the fact that the format of existing records is usually not tuned to the specific requirements of cost studies.

3.2.2 Case studies

Case studies (or on-site surveys) may take the form of in-depth time and motion studies of administrative agencies, firms, taxpayers or benefit recipients. Time spent on administration or compliance is measured precisely by researchers, equipped with stopwatches, who use a uniform cost definition. Alternatively, administrative or compliance activities may be broken down into their smallest components to which a predetermined time value is then assigned. For example, the activity 'taking something from a drawer' might consist of the following components: reaching for the drawer, grabbing the handle, pulling the drawer out, releasing the handle, reaching into the file, etc. This technique, called MODAPTS (modular arrangement of predetermined time standards) has been employed by Peat, Marwick, Mitchell & Co. [1982, p. A-25]. MODAPTS is claimed to be much more effective than stopwatch time-and-motion studies. One of the reasons is that the predetermined time values are rooted in a sample reflecting thousands of observations.

Obviously, case studies are very labour intensive, whether they use MODAPTS or not. This is especially problematical when the number of units to be studied is large (firms, taxpayers), because it makes the use of large samples practically impossible. Just how typical the sample is of the entire population remains uncertain. Earlier research shows that the level of compliance costs varies considerably between firms, even of the same size or in the same branch of industry. Hence, generalisations on the basis of small samples are dangerous to make.

The administrative costs of an agency which singlehandedly administers taxes or benefit programmes may be determined by way of a case study without the problem of doubtful representativeness arising. There is another problem inherent to this method, however: the measurement of work may affect the process being measured [Muckler 1982, p. 24]. Most people dislike being watched while working. They may get nervous and slow down, or work harder to prove themselves.

Thus, case studies are objective and reliable; the same person or team measures according to uniform definitions. But, on the other hand, case studies are

time-consuming, which precludes the use of large samples. Moreover, work measurement is often disliked and may affect the process being measured, thus threatening the validity of this method.

3.2.3 Surveys

The big advantage of a survey is that this method is relatively inexpensive, which enables the use of large samples. Therefore, surveys are especially useful for the study of compliance costs. Different survey techniques are available, e.g. by mail, by telephone, or face-to-face interviews. Telephone interviews can be conducted quickly and are relatively cheap, but they are unfit for more than a few questions on which an immediate answer can be expected. A mail questionnaire can contain more questions, and the respondent has the opportunity to look up information not readily at hand. Questions included in the questionnaire must be formulated very precise and clear, however, because the researcher is not present to make sure that the respondent interprets them correctly. The *omnibus* face-to-face survey, in which space is sold to various users, has the same disadvantage, because the interviewers are not the researchers themselves. The most accurate results are obtained by the face-to-face survey, or *interview*, carried out by the researchers themselves, but this approach is extremely labour intensive, limiting the scale and therefore the representativeness of this kind of study.

Whenever questionnaires are used, the accuracy of answers given can not be taken for granted. Questions may be understood incorrectly or differently by respondents, especially in cases where there is no researcher present to clarify difficult questions. It is important, therefore, that the questionnaire is well-designed and self-explaining. Questions should be unambiguous and easy to understand. This is especially important in the case of compliance costs, because most respondents will not be familiar with the concept. Klein-Blenkers et al. [1980, p. 50] found that a sample of 100 small and medium-sized firms incurred compliance costs (of government regulations in general, including taxes and social security) twice as high as they had claimed themselves, because respondents were not aware of all relevant cost components. This means that questionnaires should contain *itemised* questions on compliance costs. When asked for the meaning of 'compliance with administrative requirements' (Dutch: *administratieve verplichtingen*), 46 per cent of a sample of small and medium-sized firms answered 'bookkeeping in general' [Leerstoel Marktbeleid 1991a, p. 19]. In addition, many different answers were given. Yet, in the remainder of the telephone interview, respondents were asked about the 'costs of compliance', without further identification of components of these costs. Small wonder that the answers given varied enormously[54].

Not only are questions easily misunderstood, respondents may also have forgotten the information asked for. Normally, no administration is kept of compliance costs as such. Respondents may forget to count in activities that

[54] The coefficient of variation of mean money costs is 1.6, that of time costs 2.1; n=336. This means that the costs do not differ statistically significant from zero!

happened some time before, or they may over-report time spent on unpleasant activities. To avoid this recall-bias, a diary study can be used; see the next section.

Another danger to the accuracy of responses is that respondents may exaggerate their compliance costs in order to encourage legislative changes: the more they complain, the greater the expected impact on policy [Tait 1988, p. 353].

In order to secure a reasonable level of accuracy, internal and external checks may be applied. The questionnaire can be designed in such a way that the answer to one question can be used to check the reliability of answers to other questions. Responses that are clearly out of line can be investigated and if necessary rejected. Information from external sources can be used, for example data on turnover and fees of tax advisers (e.g. used by Sandford [1973]). Snijder [1981] used accountants to question entrepreneurs. When a businessman is questioned by his own accountant, he will be less inclined to exaggerate. Moreover, the accountant is familiar with the firm, which will normally increase accuracy a great deal.

Usually, surveys are conducted in order to estimate mean or total compliance costs of the entire population. Because only a sample is studied, it is important to make sure this sample is typical of the whole population. If specific groups are over-represented, the results should be weighted. Sometimes specific groups are purposely over-represented in the sample, in order to secure sufficient data to study subgroups of respondents, or in order to reduce the overall variance of results (stratified sampling). In general, statistical reliability increases with sample size, which explains the popularity of surveys.

A severe threat to representativeness is *non-response*, the refusal of part of the selected sample to answer some or any questions. Some people dislike being questioned by strangers for unknown or seemingly unimportant reasons. Mail surveys in particular suffer from this problem. If, somehow, the decision not to respond is systematically related to the object of study, i.e. compliance costs, the representativeness of the sample is in serious danger. It is imperative, then, that the nature of non-response should be analysed, and, if necessary, results should be corrected for any bias. Wicks [1965] phoned a sample of fifty non-respondents of a survey of the Montana personal income tax, and concluded that their compliance costs were probably lower than those of respondents. Tait [1988, p. 352] states that samples are 'automatically biased to weight heavily those who consider tax compliance to be a vexatious cost', because 'presumably (...) non-respondents found the (...) taxes to be insufficiently burdensome to make a fuss about'. The opposite may be equally true, however: someone who is already heavily burdened by compliance work may not be willing to spend even more time or money on this subject by filling out a questionnaire (or paying others to do so). In fact, response rates tend to be lower for small firms, which generally incur relatively high compliance costs. Unfortunately, it is not common practice in the study of compliance costs to assess non-response bias.

Summarising, surveys are relatively cheap, and take up less of the researcher's time than case studies. The accuracy of answers may sometimes be in doubt, however, due to recall bias, carelessness, or strategic behaviour. Moreover, non-response is a serious threat to representativeness.

3.2.4 Diary studies

In order to avoid the problem of recall bias, often encountered in survey studies, a diary study may be carried out. Errors in retrospective recall are related to such factors as:

- interference, or the inability to distinguish between similar events and the introduction of new and possibly conflicting information;
- length of time between the occurrence of an event and the recall of that event;
- the salience of the event; the extent to which the event is anomalous with respect to the respondent's life in general;
- the respondent's psychological state, e.g. his or her mood

[Eisenhower et al. 1991, p. 133]. When recall bias is expected to be unacceptably high, a daily working diary may be used instead of a survey. Respondents are then asked to write down time or money they spend at the moment they are actually involved in the activities under study. How accurate working diaries are is not known [Muckler 1982, p. 24]. In practice, it seems that respondents tend to leave out recording the required information until afterwards, or until shortly before the forms are collected by the interviewer, rather than keeping a daily log, as was intended [Arthur D. Little 1988, p. IV-35-37].

Apart from recall bias, the drawbacks of survey studies also apply to diary studies. The accuracy of the answers may suffer from carelessness or deliberate under- or overstatements by respondents, and the representativeness of the sample must be tested. But, on the other hand, research costs are relatively low.

3.2.5 Simulation models

Apart from (or instead of) being measured, operating costs can be modelled. The most simple approach is to estimate, for example, aggregate administrative costs of the national assistance programme incurred by municipalities in the Netherlands, by simply multiplying the expected number of beneficiaries by a standard amount of costs. Of course, there are much more sophisticated models that may be applied.

Several studies use a model to quantify compliance costs. Barker [1972] and Parker [1976], for instance, developed models to estimate the compliance costs of hypothetical VATs in the United States, in order to simulate in advance how high these costs would be if such a tax were introduced. Data from a few firms were used as inputs to compute cost figures.

Later, much more complicated models were developed by Peat, Marwick, Mitchell and Co. [1982] and Arthur D. Little, Inc. [1988]. The first firm developed a model, consisting of 29 equations, describing the compliance costs of sales and use taxes in 45 American States. A database, fed by a survey of 80 retailers and an on-site study of 18 retailers, together with the characteristics of the different taxes and the retail structure in each state, can be used to estimate compliance costs for individual retailers. Arthur D. Little, Inc. [1988] developed models of the time spent by individuals and firms on federal income tax. Data from surveys of taxpayers and firms (applying to 1983) were used to estimate total time

spent, and time spent on different forms. The purpose of this project was to project the burden resulting from IRS paperwork from fiscal year 1984 onward. In the Netherlands, the expected effects on administrative and compliance costs of three proposed legislative changes were modelled, based on both survey and interview data [Bosch et al. 1992].

The data needed for the development of cost models are usually gathered using surveys or by case study analysis. An advantage of modelling lies in the possibility to estimate costs of not (yet) existing tax or benefit programmes, or of proposed legislative changes. Another advantage is that models may be used to estimate costs in later years or for other (groups of) individuals or organisations. The drawback is that the applicability of results thus obtained for other periods or groups may be doubtful. Sophisticated models may create a false sense of accuracy, especially when based on limited factual data[55].

The models mentioned here describe time and money spent on compliance. A different approach is suggested by Dicke and Hartung [1986, pp. 24-26]. By comparing the profitability of firms (or industries) with and without the regulation under study, the costs of this regulation may be calculated, e.g. by comparing net present values in both cases. In this way, the hidden costs of other regulations may also be measured (e.g. regulations concerning working hours or opening hours of shops). No such study is known to the author, however, probably because of the many practical and conceptual problems inherent to this approach.

3.3 Valuation Problems

No matter which research method is eventually chosen, several problems concerning valuation will be encountered. First, a unit of measurement must be chosen. Then, it must be decided how joint costs and internal prices will be treated, and how time spent on compliance and psychological costs should be valued.

3.3.1 Unit of measurement

In order to measure a variable, a unit of measurement must be chosen. In the case of operating costs, several options are available. Costs can be measured in *physical quantities* of inputs, in *money*, or they may be expressed as a *cost ratio*.

Chapter 2 points out that operating costs include both material costs and time costs. Material costs may be expressed in physical units or in money terms. Usually, market prices will be available, thus different kinds of material costs may be expressed in the same unit, money, and simply be added. The same approach may be taken with time costs, provided a market price exists (staff costs, costs of external advisers). If there is no market price available (e.g. for the time spent by

[55] An example is the Peat, Marwick, Mitchell [1982] study. Notwithstanding its small sample size, compliance costs ratios are given as percentages with three decimals.

individual taxpayers), problems arise. We discuss these in section 3.3.3. Alternatively, time costs may be measured in hours or the number of permanent staff positions. In order to facilitate comparisons, measurement should be in money terms whenever possible. In intertemporal comparisons, money figures should be adjusted for inflation.

In order to increase their informative value, and to make programmes of different size comparable, figures for operating costs are often presented as a proportion of revenue or programme outlays: the *cost ratio*. This is done both for administrative and compliance costs, and both for individual programmes and for groups of programmes, or the tax-benefit system as a whole. In a very crude way, cost ratios indicate the relationship between inputs and outputs. Because they are relatively easy to calculate, the use of cost ratios is widespread. There are, however, several problems with a correct interpretation of the cost ratio. As was explained in section 2.1.3, revenue or outlays is not a perfect output measure. It depends on many factors outside the control of the administrative agent, e.g. tax rates, tax allowances and structure, benefit levels, economic growth, etc. If, for example, the benefit level were to be doubled, the cost ratio would be halved, without any change in productivity. Moreover, comparisons based on the cost ratio ignore differences in quality: a higher cost ratio may be due to greater effectiveness of administration (see section 2.1.3). Finally, some programmes involve both revenues and outlays, e.g. social insurances. Which item should in such cases be used to calculate the cost ratio? Differences between revenues and outlays may arise from, e.g., administrative costs, financed out of revenue, or the building-up of financial reserves in funds.

Instead of the cost ratio, the *cost-to-GDP ratio* can be used. This ratio is independent of changes in revenues, or outlays, which are outside the control of the administrative agent. The obvious disadvantage, however, is the lack of connection with programme size. A high cost-to-GDP ratio may be quite acceptable if it concerns a large-scale programme, while the same ratio would be considered unreasonably high for a programme of relative small size.

The cost-to-GDP ratio may be useful, however, to indicate the importance of total operating costs in the economy. The tax-benefit system may be considered as a separate economic sector, and it may be interesting to know the share of the tax-benefit industry in total GDP. Methodologically, this procedure is not entirely sound, however, because part of operating costs is not taken into account in the calculation of GDP. Compliance work done by employees is reflected in GDP through the wages they receive. The same applies, mutatis mutandis, to material compliance costs. Compliance work done by unpaid persons like individual taxpayers or owner/managers of firms does *not* contribute to GDP. This should be kept in mind when total operating costs are expressed as a percentage of GDP, which is frequently done.

3.3.2 Joint costs and internal prices

Costs of services supplied centrally for several departments, e.g. housing and computer services, usually are difficult to allocate to individual departments. Moreover, a given department frequently handles several taxes or benefit programmes. Even individual employees may spend only part of their time on a specific programme. Under these circumstances, attributing joint costs to particular tax or benefit programmes can be rather difficult. Assumptions will have to be made, how to attribute costs. A practical solution, which is commonly used, is measuring the time spent on each tax or benefit programme, and dividing non-labour costs accordingly[56].

An example of the joint cost problem is the case of a firm employing financial advisers or administrators. Normally, the firm will receive unitemised bills. What proportion of the bill should be ascribed to compliance costs of taxes or benefits programmes is then unclear. Only in rare cases does this problem not arise, i.e., where an adviser is employed for one specific job. Somehow proportions of unitemised bills must be allocated to tax or benefit programmes which are part of the job contracted out. A way around this problem is the time equivalent method employed by Arthur D. Little [1988, p. II-4 and V-1]. In this study, time spent on individual income tax by paid-preparers is estimated by measuring the equivalent time that would have been spent by individuals who used paid-preparers, if those taxpayers had instead prepared their returns themselves. Total time spent is estimated from times for self-preparers only, which implicitly substitute an equivalent time for the actual time of taxpayers who used a paid-preparer. One might expect this approach to underestimate actual time spent, however, because individuals employing paid-preparers are likely to have more complicated tax affairs than self-preparers.

A related problem arises when internal prices, e.g. rent government agencies charge each other, do not reflect market values. Sometimes a government department supplying goods or services to another department will charge a price. Often these prices differ from the economic costs, and merely serve as standard prices. The economic costs are the opportunity costs to society: the value in the best alternative use, which is reflected in the market price [Sandford et al. 1989, p. 7]. Whenever possible, internal prices should be compared with market prices, and corrected if necessary. Unfortunately, for many government services, no market price exists. An example of the latter case is the collection of social insurance contributions by the Tax and Customs Administration (TCA). The TCA charges a compensation from the social insurance funds. No market price exists with which this might be compared.

Although the measurement problems described in this section will inevitably lead to less accurate cost estimates, in many cases the error margin seems to be acceptable, because a very large part of administrative costs consists of labour costs (see section 3.2.1). Distortions caused by joint costs for overhead and housing are limited by the relatively low share of such components in total costs. In a few

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[56] See e.g. Bauer [1988].

cases, the error margin may be quite large, however, especially where internal prices constitute a large share of total costs. Examples in the Netherlands are the rent subsidy programme and several social insurances.

3.3.3 Time valuation

An important part of total operating costs of tax-benefit programmes consists of *time* spent on administrative or compliance work. In order to arrive at a monetary equivalent for operating costs, a value has to be accorded to the time thus spent. The literature on this subject is not abundant. Sandford et al. [1989, pp. 35-39] offer the most satisfactory analysis. For time spent by professional advisers or employees, a market value exists. Indeed, it is often easier to determine the monetary cost of a professional adviser than the time spent by him or her, because the bill normally will not specify labour time. Hours spent as part of administrative costs may be easily converted into a monetary figure by using the going wage rate. The case of compliance costs is more complicated. Time spent by owners/managers or individuals on compliance work is normally measured in hours. No market value exists for this time.

The time spent by an owner/manager on compliance work should be valued at the opportunity cost to the firm. If the owner/manager had spent this time doing his or her proper job, whether this is plumbing or managing a business, an additional return for the firm would have resulted. In the case of a plumber, the average wage rate of a plumber who is not self-employed may be used to approximate hourly costs. In many cases, such information is not available. Another approximation is to take the average hourly income the owner/manager receives from self-employment. For obvious reasons, this kind of information is extremely hard to come by. Both approximations are based on the assumption that time spent on compliance would otherwise have been spent on other business matters. If hours would have been spent as leisure time, however, the opportunity cost would (by definition) have been at least equally high. A practical way around this problem is to simply ask survey respondents how they value their own time, and to correct any extreme values. This is the approach that has been used in this book.

Even more difficult to value is the time spent by individuals complying with tax or benefit regulations. Sandford et al. [1989, p. 37] identify four values which may be accorded to leisure time. The first is the individual's wage rate, or the wage that could have been earned had he or she chosen to work in employment. If the individual has the opportunity to work longer hours, the wage rate represents the opportunity cost. The second value which may be accorded to leisure time is the individual's wage rate net of income tax and social security contributions. This constitutes the cost to the individual, but not the cost to the economy. A third measure is a proportion of the wage rate, because most people simply don't have the option to work extra hours at their wage rate. Moreover, in many cases, one can choose when to do compliance work, and the work can be done in one's own home. Additional hours of paid work don't usually come with such freedom.

Finally, it can be argued that a higher value than the wage rate should be used to value compliance time, because this reflects an overtime rate, and because compliance work is often intensely disliked.

The issue hinges on whether time spent on compliance with tax-benefit programmes should be valued according to the welfare loss to the individual or as resource cost to the economy. In the first case, the value can be considered 'equivalent to the expense at which every man would be willing to redeem himself from it' [Smith 1966, p. 309]. This value not only reflects the time spent on compliance, but also the 'trouble, vexation and oppression' Smith is concerned with: the psychological costs of taxes or other transfer payments. One could ask individuals what they would be willing to pay to avoid all compliance cost of a specific tax or benefit programme, while the amount of tax paid or benefit received would remain the same. This approach was attempted by Sandford [1973, p. 174-176] and Slemrod and Sorum [1984b, p. 474], but from the replies it was obvious that many respondents failed to grasp the meaning of this question. In the literature on the economics of transport, many studies can be found which have tried to measure the value people put on time, but outcomes of these studies have been variable [Sandford et al. 1989, pp. 37-38].

Alternatively, time absorbed in compliance work may be valued according to the resource cost which it represents to the economy. The operating costs of a tax-benefit system may be considered as the input of a separate economic sector, the tax-benefit industry. The 'output' of this 'industry' is the transfer of money between the public sector and the private sector. Had this input been directed elsewhere, a different output would have resulted. The value of this hypothetical alternative output represents the opportunity costs of the tax-benefit system to society at large. The output of an economy is measured, however imperfectly, by Gross Domestic Product (GDP). Thus, as a rough measure of the economic value of time spent on compliance, GDP per labour year may be used[57].

3.3.4 Psychological costs

Almost immeasurable are the costs of worry and anxiety caused by taxes or other transfer programmes. Even completely honest individuals may fear that they make mistakes in filling out forms. Tax or social security investigations may cause sleepless nights even if nothing is wrong. Others, on the other hand, may worry that they haven't used every opportunity to minimise their tax payments or to maximise benefit receipts. Legislative changes can increase psychological costs in two ways: by generating a general sense of insecurity concerning compliance required from people, and by inducing fear that certain favourable features or programmes (tax allowances, subsidies, benefits) may be terminated or restricted.

It seems improbable that psychological costs of taxes and other transfers will ever be accurately measured. It is conceivable, however, that compliance costs can be approximated in a way that includes psychological costs. As noted before, two

[57] This procedure has been followed by Bannock and Albach [1989, pp. 200-201].

approaches have been attempted which take into account every aspect of compliance costs. The first is to ask respondents directly what they would be willing to pay to avoid all compliance costs (see section 3.3.3). Unfortunately, the results of this approach are rather disappointing; the concept of cost compensation seems rather remote from most people's experience.

An alternative approach departs from the fact that there are always people who could gain by performing certain activities, e.g. itemising tax deductions or claiming benefits, but who don't take up the opportunity. It can be postulated that they refrain from doing so because compliance costs would exceed the financial gain that can be obtained. If information about the latter is available, the former can be estimated. Pitt and Slemrod [1988] estimated the compliance costs of itemising tax deductions using information from the tax authorities which implied that there were taxpayers who would have saved money by itemising but who refrained from doing so. In a similar way, data on non-take-up of subsidies or benefits, if these could be obtained, would enable us to estimate the compliance costs of these programmes. The obvious drawback of this approach is its doubtful validity: it is not entirely clear what one measures. A host of reasons may exist for not claiming benefits, for example ignorance, social stigma, pride, etc. The necessary assumption that people actually *choose* not to claim benefits or itemise tax deductions considerably obscures the concept of compliance costs thus measured.

Part 2

Measuring costs of tax-benefit programmes

4

Administrative costs

This chapter quantifies administrative costs of the tax-benefit system in the Netherlands. After a brief word on the methodology applied, available cost data are presented programme by programme. Finally, an overview is presented and total administrative costs are calculated, after which some international comparisons are made.

4.1 Methodology

Administrative costs have been defined in Chapter 2. Chapter 3 discussed a number of measurement problems related to administrative costs. These chapters have clarified that a uniform approach to calculate administrative costs, defined identically and in considerable detail, following an identical methodology, is hardly feasible. Therefore, a more pragmatic approach will be taken: based on the available data, administrative costs are approximated as accurately as possible. In this chapter, such estimates of administrative costs will be presented.

For several of the transfer programmes considered here, (estimates of) administrative costs have been published before. Especially regarding social insurances, published cost figures are available. Unfortunately, in some cases it is not completely clear how these figures have been drawn up. In such cases, and whenever no published cost figures were readily available, the administrative agencies responsible for the programmes under review were asked to supply lacking information. In a few cases, where only little information was requested, this was obtained by phone. More complicated cases were handled by sending letters, sometimes followed by face-to-face interviews. Whenever possible, estimates of administrative costs are given for a succession of years; the aim has been to estimate these costs for at least one year, as close to 1990 as possible.

Most of the transfer programmes analysed here have been subject to (sometimes very substantial) changes in the previous decade, and also while this study was being carried out. It would be impossible to present a detailed account of all relevant programme changes. Thus, such details of regulations, as are given in the following sections, apply to the period around 1990.

4.2 Subsidies to firms

Four major business-subsidy programmes have been investigated. The rules governing these subsidy programmes have been changed several times since their introduction. Usually, such programmes are, in effect, a succession of overlapping arrangements, which carry the same name.

No data on administrative costs of the programmes concerned are published on a regular basis. Two sources are available, however. The Ministry of Finance published a review of all major subsidy programmes, to help evaluate whether these schemes should be continued, considering the tight government budget [MvF 1991a and 1991b]. Three of the four programmes to be discussed here are covered, and estimates of administrative cost of two of them are offered. Second, the Institute for Research of Government Expenditures (IOO, *Instituut voor Onderzoek van Overheidsuitgaven*) published a study of the productivity of selected government expenditure programmes [Kabel et al. 1992], which gives administrative costs of three of the four subsidy programmes scrutinised here.

Unfortunately, both studies use a rather limited definition of administrative costs, excluding costs not made by central government. Moreover, additional information was needed in order to assess the accuracy of the cost estimates. So, the government agencies administering the relevant subsidy programmes were contacted for further details.

4.2.1 Subsidy for regional investment projects

The subsidy programme for regional investment projects IPR *(Investeringspremie-regeling Regionale Projecten)* was introduced in 1968. IPR grants are intended to reinforce the productive structure of socio-economically weak regions, in order to structurally improve their employment situation. Entrepreneurs starting a business or expanding their business substantially in these regions may claim an investment subsidy. The number of regions for which IPR applies has been gradually reduced, though.

IPR is administered by the Ministry of Economic Affairs and the relevant provinces. Investment projects amounting to less than Gld 4m are administered by the provinces. These provinces have set up their own schemes (decentralised IPR). They allocate their own IPR-budgets, which include a compensation for administrative costs amounting to 2 per cent of the budget total.

Whether this 2 per cent actually completely compensates provinces for the administrative costs they incur is unknown to the Ministry. Inquiries directed at the provinces concerned yielded rather disappointing results. Civil servants, responsible for IPR, spend only a limited part of their time on this programme; exactly how much time is difficult to say. Moreover, attribution of overhead costs poses difficulties too. Ultimately, only two provinces managed to come up with estimates of administrative costs (table 4.1). We used these figures to estimate total administrative costs of decentralised IPR. In 1990, the provinces of Friesland and Gelderland needed Gld 616,000 to distribute a budget of Gld 19.15m. Assuming a similar cost/budget ratio for the other IPR-provinces, total administrative costs of decentralised IPR may have amounted to Gld 2.25m in 1990.

Table 4.1 Estimated administrative costs of decentralised IPR in provinces Friesland and Gelderland (Gld 1,000)

	1989	1990	1991
Friesland			
Budget	11,510	11,510	. (a)
Administrative costs	485	463	494
Gelderland			
Budget	7,640	7,640	7,640
Administrative costs	141	153	179

(a) As from 1991, the provinces of Groningen, Friesland and Drenthe joined their IPR-budgets.
Sources: private communications Ministry of Economic Affairs (budgets); Provinces (administrative costs).

Subsidy applications for investment projects, amounting to more than Gld 4m, are administered by the Ministry of Economic Affairs (central IPR). Administrative costs are estimated by the Ministry at Gld 1.9m in 1991. This amount consists of Gld 1.6m for staff, including housing, and Gld 0.28m for other costs[58]. The same figures are given in Kabel et al. [1992, p. 138] for 1990. They are based on the costs of nineteen permanent functions, a fixed amount per function for housing, and a percentage of staff costs for overhead.

Apart from the Ministry and the relevant provinces, an important role is played by the Regional Development Corporations (ROMs, *Regionale ontwikkelingsmaatschappijen*). They advise on whether subsidy applications should be awarded. Their advisory role is part of the general task the state and provinces have commissioned to ROMs: the promotion of economic development in economically less-developed areas. The operating costs of ROMs are paid by the state and provinces, but the costs ROMs specifically incur in connection with IPR are not known.

Table 4.2 summarises the administrative costs of IPR. In 1990, total costs (excluding ROMs) amounted to an estimated Gld 4.2m, which equals 1.5 per cent of subsidy outlays. Cost of decentralised IPR exceed 2 per cent of the budget. That means that compensations the provinces receive from the Ministry of Economic Affairs (2 per cent of IPR-budget) do not fully cover their costs.

Table 4.2 Administrative costs of subsidy for regional investment projects IPR, 1990 (Gld m)

	Administrative costs	Subsidy outlays	Cost ratio (%)
Central IPR	1.9	200	1.0
Decentralised IPR	2.3	90	2.5
Total IPR (a)	4.2	280	1.5

(a) Except costs incurred by ROMs (see text).
Sources: EZ (subsidy outlays); see text (costs).

[58] Source: private communication Ministry of Economic Affairs.

4.2.2 Innovation subsidy programme

The innovation subsidy programme INSTIR *(Innovatiestimuleringsregeling)* is a subsidy for Dutch firms which covers part of the wage bill related to research and development carried out within the firm, or commissioned by and specifically for the firm. The programme was introduced in 1984 and is administered under the responsibility of the Ministry of Economic Affairs[59]. Subsidy can only be claimed after costs have been incurred. There is no upper limit set to total subsidy outlays, but following substantial overruns of the available budget, subsidy amounts had to be reduced considerably from 1989 onward. From the start, INSTIR has been aimed particularly at small and medium-sized enterprises (SMEs). Emphasis on SMEs was reinforced in 1989 and again in April 1991, when firms with over 100 employees were excluded from INSTIR subsidies. The need to cut back government expenditures has led to the demise of INSTIR as per 1 October 1991.

Administration of INSTIR has been entrusted to DIR *(Dienst Investeringsrekening)*, an administrative agency which comes under the Ministry of Economic Affairs. Apart from INSTIR, DIR ran other programmes as well. In December 1992, DIR merged with StiPT, an administrative agency under the Ministry of Economic Affairs which carried out programmes aimed at promoting technology. The new organisation is called SENTER.

Information on the administrative costs of INSTIR is not published on a regular basis. DIR did publish annual reports, but these contained only data on total administrative costs of the organisation, which was only partly occupied with the INSTIR programme. In a review of major subsidies, published by the Ministry of Finance, administrative costs of INSTIR are estimated at about 1.2 per cent of the subsidy budget in 1990, and 2 per cent in 1991 [MvF 1991b]. No explanation is given as to how these figures have been derived.

The information which has been used in this section has been kindly supplied by SENTER. Administrative costs have been apportioned to INSTIR on the basis of the number of subsidy applications and standard costs per application. Because of organisational changes, already mentioned, it was not possible to estimate administrative costs of INSTIR for the years prior to 1992.

Table 4.3 sets out administrative cost estimates for 1992. January 31st of that year was the last day INSTIR-applications could be submitted. During the year, most applications, not yet assessed, had been decided upon. This makes 1992 hardly a 'typical' year with respect to INSTIR administration. On the other hand, the workload in 1992 was rather similar to the 1991 workload: in 1992, 6,127 applications were handled, hardly less than in 1991 (6,315). For other years, as explained above, data are simply not available.

For the assessment of applications, external specialists were hired. Costs of such externally provided services amounted to Gld 2.2m, more than 50 per cent of total administrative costs. Staff costs amounted to Gld 1.8m. Non-staff costs are at a comparatively low level (Gld 80,000). Total costs amount to Gld 4m, which is

[59] For more details on this programme, see Heijland van 't Hul et al. [1988].

equal to 3.8 per cent of subsidy outlays. Costs of housing are not included, because they are unknown.

Table 4.3 Estimated administrative costs of innovation subsidy programme INSTIR, 1992

	Gld 1,000	%
External costs	2,200	54
Staff costs	1,800	44
Non-staff costs	80	2
Total costs	4,000	100
Subsidy outlays	105,000	
Cost ratio (%)	3.8	

Sources: private communication SENTER (costs); DIR (subsidy outlays).

4.2.3 Technology subsidy programme

The technology subsidy programme PBTS *(Programmatische bedrijfsgerichte technologiestimulering)* was introduced in 1987, as part of the policy of the Ministry of Economic Affairs, aimed at stimulating technology in specific fields. Dutch firms may claim a subsidy of 37.5 per cent of costs of feasibility studies, research projects or demonstration projects in selected technological fields (1992: bio-, information-, materials- and environmental technology). The available budgets are set annually. Applications for this subsidy are listed in order of merit by external specialists; subsidies are awarded subsequently starting with the most promising project, until the available budget has been exhausted. In 1992, 665 applications were handled, of which 349 were accepted; at the time, 1,203 subsidised projects were being carried out. The subsidy budget amounted to Gld 114m.

Administration of PBTS (and several other schemes) was entrusted to StiPT, which comes under the Ministry of Economic Affairs. In December 1992, StiPT merged with DIR, a similar organisation, into SENTER (see section 4.2.2).

The annual reports of the former StiPT organisation do not contain data on the administrative costs of particular programmes. Estimates of the administrative costs of PBTS have been published, however. The subsidy review of the Ministry of Finance states that costs amounted to Gld 7.35m in 1990, while the cost budget for 1991 amounted to Gld 8.65m [MvF 1991b]. How these figures were derived is not explained. Kabel et al. [1992] report an amount of Gld 8.3m in 1990. Although based on information from the Ministry of Economic Affairs, SENTER considers this estimate to be somewhat on the high side. On request, SENTER kindly supplied a new estimate, which relates to 1992. The administrative costs of PBTS are attributed on the basis of time spent (table 4.4).

Estimated total administrative costs of PBTS amount to Gld 8.1m. 70 per cent of total costs are taken up by staff costs. Material costs (including housing and computer costs) make out 20 per cent of the total, and additional costs (including

costs of external specialists), 10 per cent. The cost ratio proves to be almost 8 per cent.

Table 4.4 Estimated administrative costs of technology subsidy programme PBTS, 1992

	Gld 1,000	%
Staff costs	5,700	70
Material costs	1,600	20
Additional costs	800	10
Total costs	8,100	100
Subsidy outlays	104,000	
Cost ratio (%)	7.8	

Sources: private communication SENTER (costs); StiPT (subsidy outlays).

4.2.4 Investment subsidy for maritime shipping

The investment subsidy for maritime shipping IPZ *(Investeringspremieregeling Zeescheepvaart)* is a programme meant to promote maritime shipping under the Dutch flag, and if possible, to promote Dutch shipbuilding as well. The programme was introduced in 1976. Dutch shipowners investing in modern, high-quality ships sailing under the Dutch flag may claim an investment subsidy of 10 per cent, to be paid out in five yearly instalments. About 80 per cent of the twenty to eighty applications for IPZ per year are granted. In 1990, subsidy outlays amounted to Gld 107m. After 1992, IPZ was not continued.

IPZ was administered by the Ministry of Transport. The Ministry of Economic Affairs and the Ministry of Finance participated in the Advisory Committee on Maritime Shipping Support *(Adviescommissie Steunverlening Zeescheepvaart)*. The National Investment Bank (NIB, *De Nationale Investeringsbank N.V.*) advised whether subsidy applications qualified.

The administrative costs incurred by the Ministry of Transport have been estimated by that Ministry, on request of the Institute for Research of Government Expenditures (IOO), on the basis of timekeeping, during six months in 1990: they amount to Gld 280,000 [Kabel et al. 1992, pp. 132-134]. Costs of housing are included, and so are the costs of policy-making and evaluation which are directly related to IPZ. Staff costs amount to Gld 250,000, other costs to Gld 30,000. The administrative costs are made up from the following components:

- handling of applications 35%
- payments 5%
- control 20%
- support 20%
- policy-making 20%

The costs incurred by the Ministry of Economic Affairs and the Ministry of Finance are roughly estimated at Gld 20,000. These costs mainly consist of preparation for and participation in the monthly meetings of the Advisory Committee.

Kabel et al. [1992] only include costs incurred by central government, which excludes the NIB. NIB estimates that the average IPZ advice takes 25.5 hours. At Gld 200 per hour (including overhead costs), the average IPZ advice costs Gld 5,100[60]. With 25 IPZ applications in 1990, NIB costs amounted to an estimated Gld 128,000. Thus, total administrative costs of IPZ amounted to Gld 430,000 in 1990; that is 0.4 per cent of subsidy outlays (table 4.5).

Table 4.5 Administrative costs of investment subsidy for maritime shipping IPZ, 1990

	Gld 1,000	%
Ministry of Transport		
Staff and overhead	250	58
Other costs	30	7
Ministry of Economic Affairs and Ministry of Finance		
Meetings Advisory Committee	20	5
Nationale Investeringsbank N.V. (NIB)		
Advice on subsidisation	130	30
Total administrative costs	430	100
Subsidy outlays	107,000	
Cost ratio (%)	0.4	

Sources: see text (administrative costs); V&W (outlays).

4.3 Subsidies to households

4.3.1 Study grants

The study grants programme WSF *(Wet op de studiefinanciering)* was introduced on 1 October 1986. This programme replaced the previous, complicated system, which offered a combination of study grants, interest-free loans and child allowances. Under the new, unified programme, students who meet the necessary conditions may claim a (partial) compensation for study costs and the costs of living. In 1990, about 550,000 students received a total of Gld 4.1bn in grants.

As from 1 July 1988, WSF is administered by a decentralised unit of the Ministry of Education, called *Informatiseringsbank* (IB)[61], which also carries out several other programmes (e.g. study-cost compensation, section 4.3.2). Information to students about WSF is supplied by 25 regional offices *(steunpunten)*. These information offices are financed by universities and colleges, which are compensated for the costs involved by IB[62]. Apart from part of the IB budget,

[60] Source: private communication NIB.

[61] As from January 1st, 1994: *Informatie Beheer Groep*.

[62] As per 1 January 1994, IB took over the information offices.

costs associated with the WSF-policy section *(Directie Studiefinancieringsbeleid)* of the Ministry of Education should be attributed to WSF as well[63].

The introduction of WSF was an extremely cumbersome process. The National Audit Office *(Algemene Rekenkamer)* reported an administrative crisis in 1986/87, and concluded, that for 1986-88, no reliable cost figures could be estimated [Algemene Rekenkamer 1990, p. 33]. In 1989, IB published its first annual report [IB]. Although this report contains administrative cost figures, these are not attributed to individual programmes (or products, as they are called), of which WSF is only one. The expenditures of the regional information offices are included, however. Expenditures are given for different product groups and departments of IB. Part of the overhead (automation, customer relations, etc.) must be attributed to the WSF product group. To allocate such overhead costs, the share of the WSF product group in aggregate costs of all product groups may be used. In this way, administrative costs of WSF are estimated at Gld 81m in 1989; 55 per cent of total administrative costs of the IB. In a background study, reporting on the causes of the increase of WSF outlays in the late 1980s, the National Audit Office comes up with the same percentage for 1989, without specifying how this figure was derived [Algemene Rekenkamer 1990, p. 33]. When asked for his comment, the general manager of IB replied that the estimate is 'correct'; presently, other methods for cost allocation are being investigated at IB.

Because of a drastic change of the organisational structure of IB in 1990, a similar estimate for later years can not be made. However, Kabel et al. [1992, pp. 110-113] give an estimate of the administrative costs of WSF in 1990: these amounted to Gld 78.2m.

At the Ministry of Education, eight employees are directly involved with WSF. IB estimates their cost at Gld 1.058m[64], Kabel et al. [1992, p. 112] at Gld 1.6m.

Total administrative costs of WSF may be estimated at Gld 80-82m in 1989-90, which equals 2 per cent of the total amount paid out to students.

4.3.2 Study-cost compensation

Parents of students who do not (yet) qualify for WSF, which is restricted to students of at least eighteen years old, may apply for a grant under the TS programme *(Tegemoetkoming Studiekosten)*, which was introduced in 1970/71. While WSF-grants cover costs of living as well, TS is restricted to study-costs only (tuition fees, books, travel expenses, etc.). In 1989, TS outlays amounted to Gld 450m.

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[63] As from 1990, students receiving WSF, who live away from home, receive a travel card from *OV-Studentenkaart BV*, instead of compensation for travel costs. Although part of WSF, the student travel card is not a cash transfer and thus falls outside the scope of this study. The administrative costs amounted to Gld 3.5m in 1990 [Kabel et al. 1992, p. 112].

[64] Private communication IB.

TS is administered by a decentralised unit of the Ministry of Education, called *Informatiseringsbank* (IB), which, among other programmes, also carries out WSF (section 4.3.1). The administrative costs of TS can be estimated in the same way as those of WSF, by attributing part of the costs of IB overhead departments to TS, according to the share of the costs of the TS product group in total product group costs (see previous section). Estimated administrative costs of TS amount to Gld 19m in 1989, 4.2 per cent of programme outlays. As per 1990, the TS product group has been merged with the tuition fees product group of IB; therefore, separate cost figures for TS are no longer available.

4.3.3 Rent subsidy

The individual rent subsidy programme IHS *(Individuele Huursubsidie)* was introduced in 1970. Its aim is to keep housing affordable for lower income groups. Whether households qualify for IHS, and the amount of subsidy granted, depend on age, rent level, income, and composition of claiming households[65]. Mainly as the result of legislative changes, the number of households receiving IHS has exploded from 31,000 in 1970/71 to 953,000 in 1990/91 (about 15 per cent of *all* households in the Netherlands). Subsidy outlays increased in the same period from Gld 8m to Gld 1,779m.

IHS is administered by HIS *(Hoofdafdeling Individuele Subsidiëring)*, a division of the Ministry of Housing (VROM). An important role in implementing the programme is also played by both landlords and municipalities.

More than 80 per cent of beneficiaries receive IHS through their landlord (housing association or private landlord), in the form of a rent reduction. Moreover, many landlords help their tenants fill out application forms and check the correctness of supplied information. Landlords are compensated (by the Ministry of Housing) for the costs they incur in deducting subsidies from rents. These cost compensations are not based on actual expenses, however: landlords receive a standard amount per claimant. The standard amount has been adjusted several times. In 1992, a HIS-study of actual costs incurred by landlords led to a reduction of the annual standard compensation per tenant by 10 per cent to Gld 68.40 [VROM c, p. 27].

Another important part in IHS administration is played by the municipalities, which pass on application forms to HIS after the contents have been verified. The costs the municipalities incur are supposed to be covered by the Municipality Fund (*Gemeentefonds*: the construction through which the State channels general-purpose grants to the municipalities). The amounts municipalities spend, with respect to their role in IHS administration, are not known. Within the scope of this study, it has not been possible to estimate these costs.

A second task of municipalities is to pay out IHS advances. This task may be compared to that of landlords who pass on IHS through rent reductions. Some

[65] For more details on the programme, see Paping [1980] or Heineken [1987].

seven per cent of IHS beneficiaries receive advances from their municipalities. For this task, municipalities receive a cost compensation, just like landlords do.

Seven years after its introduction, IHS was evaluated by Lucassen and Priemus [1977]. The administrative costs in 1975 were estimated at Gld 33m, 15.5 per cent of programme outlays at the time. Per recipient, administrative costs on average amounted to Gld 147, which was higher than the minimum subsidy (Gld 120). Therefore, and also to make it worthwhile for the recipient, who also incurs compliance costs, Lucassen and Priemus [1977, p. 115] suggested that the minimum IHS-subsidy be increased.

No other independent estimates of the administrative costs of IHS are known to this author. The Ministry of Housing has published some cost figures, but not in a systematic way[66]. The cost data presented here have been kindly supplied by HIS, the IHS-division of the Ministry of Housing.

Apart from IHS, HIS also administers HGB *(Huurgewenningsbijdrage)*, a related programme[67]. Unfortunately, it is impossible to separate the administrative costs of IHS and HGB. Because the share of the HGB programme is relatively small (less than 1 per cent of IHS-outlays in 1990), total administrative costs of HIS may be used as an approximation of the costs of IHS. Since 1984, the HIS division operates under self-management, which implies that several budgets, competencies and responsibilities have been delegated. This considerably facilitates the quantification of administrative costs.

Table 4.6 sets out the estimated amount and composition of administrative costs of IHS. In 1990, administrative costs amounted to Gld 109m, about 6 per cent of subsidy outlays or Gld 114 per recipient. Compensations to municipalities and landlords constitute by far the most important expenditure item.

Staff costs have been estimated on the basis of a standard price per permanent position. Staff not employed by HIS are not included, and, until 1990, neither are temporary staff. Staff costs have increased considerably since 1980, not just because of the increased number of IHS-recipients, but also because several tasks previously carried out by other departments have been taken over by HIS.

Non-staff costs are mainly automation costs. Automation costs are at about the same level as staff costs. Both current and capital expenditures are included. In 1984-1988 a new information system was developed, which, together with the previous system, has been operational in 1988, resulting in extra costs. The growth of automation costs after 1987 is also a result of the fact that HIS took over debt collection, and of expanded verification procedures aimed at reducing fraud and abuse of the programme. Other non-staff costs have been roughly estimated, because part of the budget for these costs has not been delegated to HIS. Such costs make up about 5 per cent of total costs.

Overhead costs, incurred at central divisions of the Ministry, are excluded, because HIS makes little use of centrally provided services. Costs incurred by the Tax and Customs Administration, which checks income data supplied by IHS-

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[66] See e.g. VROM [b] or VROM [c].

[67] The HGB programme has been discontinued as per 1 July 1992.

applicants, are excluded too; these costs are unknown but presumably low. Housing costs are excluded as well.

Meaningful comparison of administrative costs over time, as presented in table 4.6, is difficult, because

- gradually, more overhead costs have been included in the HIS budget;
- emphasis on control and quality has been increasing;
- several cost components have been administered centrally (outside HIS);
- the development of a new information system, with two systems operating together in 1988, distorts the time series;
- compensations to municipalities and landlords do not directly reflect actual costs; the amount of compensation per tenant has been adjusted several times.

Furthermore, it should be borne in mind that the administrative costs incurred by municipalities (apart from providing advances) are *not* included, and that estimates are based on *expenditures*, not *costs*.

Table 4.6 Estimated administrative costs of rent subsidy programme IHS (a) (Gld m)

Year	Compensation to municipalities and landlords	Staff costs	Other costs	Total costs	Total subsidy (b)	Number of recipients (x1,000)(b)	Cost ratio (%)	Costs per recipient (Gld)
1980	-	9	10	19	630	460	3.0	41
1981	-	10	12	21	830	530	2.6	40
1982	-	11	14	24	1,070	630	2.3	39
1983	-	13	15	28	1,130	640	2.5	44
1984	57	14	18	89	1,270	710	7.0	125
1985	58	16	20	94	1,350	780	7.0	121
1986	74	17	20	111	1,470	830	7.6	134
1987	54	18	20	93	1,550	880	6.0	105
1988	40	20	26	86	1,610	920	5.3	94
1989	56	21	27	104	1,700	950	6.1	110
1990	64	19	26	109	1,780	950	6.1	114
1991	73	19	29	121	1,840	960	6.6	126

(a) Costs include administrative costs of the HGB programme (see text); costs incurred by municipalities are excluded, except for cost compensations related to IHS advances.

(b) The subsidy year starts 1 July; in this table, costs in e.g. year 1990 are related to subsidy outlays and number of recipient households in subsidy year 1990/91.

Sources: private communications HIS.

4.4 Taxes and levies

4.4.1 Radio and TV licence fees

Radio and TV licence fees finance the Dutch public broadcasting system. There are two rates: households with one or more television sets pay for an A licence (annual amount Gld 168 in 1990), whereas households with one or more radio sets, but no television, pay for a B licence (Gld 49 in 1990). Under some circumstances, exemptions may be granted. As from 1 January 1988, hotel owners enjoy a reduced rate.

Radio and TV licences are administered by *Dienst Omroepbijdragen* (DOB), a division of the National Post Office (PTT[68]). Fees collected are handed over to the Ministry of Welfare, Public Health and Culture (WVC). As per 1 January 1989, the Post Office, including DOB, has been privatised, but the relationship with the Ministry remained unchanged. As per 1 January 1989, a provincial surcharge is levied, to finance regional broadcasting.

Because the administration of the programme is concentrated in one organisation, which exists for this sole purpose, administrative costs are relatively easy to quantify. DOB publishes annual reports, which present administrative expenses [DOB]. Comparison of spending over time is difficult, however, because capital expenditures, for example for the development of a new collection and registration system, are fully taken into account in the year of payment, instead of being spread out over the years these investments bear fruit.

In 1990, DOB spent Gld 34m in order to collect Gld 840m (cost ratio 4 per cent). Table 4.7 shows trends in costs and revenues since 1980. Revenues rose steadily (mostly because the growth of the number of households exceeds population growth) until 1989, when the introduction of a provincial surcharge brought revenue at a structurally higher level. Another structural increase, in 1991, was the result of a campaign in 1991-92 to combat evasion, which raised the number of registered radio or TV owners by 300,000 in 1991 alone, and is expected to eventually raise structural revenues by some Gld 50m per year. This campaign pushed up administrative costs as well; in 1991 by Gld 6.7m. Further cost increases in 1991 are explained by the fact that from then on, bank costs incurred by the parent company PTT are partly charged to DOB. The cost ratio, which in the last decade varied between 4.0 and 4.6 per cent, increased to 5.3 per cent in 1991. The costs per registered radio or TV owner increased from Gld 5.60 in 1980 to Gld 8.60 in 1991.

Table 4.7 Administrative costs and revenues of radio and TV licence fees

Year	Costs (Gld m)	Revenue (Gld m)	Cost ratio (%)	Costs per registration (Gld)
1980	25	550	4.5	5.6
1981	26	580	4.5	5.9
1982	29	630	4.6	6.3
1983	30	670	4.4	6.4
1984	29	710	4.1	6.2
1985	29	730	4.0	6.2
1986	31	740	4.1	6.4
1987	31	760	4.1	6.4
1988	33	770	4.3	6.6
1989	33	820	4.0	6.5
1990	34	840	4.0	6.8
1991	46	870	5.3	8.6

Source: DOB.

[68] Recently, PTT is also known as KPN (*Koninklijke PTT Nederland*).

4.4.2 Environmental levies

Environmental levies under the WABM law *(Wet algemene bepalingen milieuhygiëne)* were introduced in 1988 as earmarked taxes to finance environmental policy measures. Due to various legislative changes, WABM revenues have grown considerably since its introduction. In 1992, WABM-levies were mostly transformed into a 'green' tax on fuel use.

Initially, WABM was administered jointly by the Ministry of Housing, Physical Planning and Environmental Protection (VROM) and the Tax and Customs Administration (TCA). In 1992, administration became the full responsibility of the Tax and Customs Administration.

On request, VROM estimated staff time and the costs of outside advisers working on the WABM programme. On the rough assumption that staff costs, including overhead, amount to Gld 150,000 per labour year, administrative costs were estimated. These increase gradually from Gld 1m in 1988 to Gld 2.4m in 1991 (table 4.8).

Estimates of administrative costs, incurred in 1988, 1989 and 1990 by the Tax and Customs Administration, are published in the annual budgets of the Ministry of Finance (see section 4.4.3). Such estimates are based on total manpower spent on particular tax programmes, and by attributing non-staff costs accordingly. Administrative costs of WABM, thus estimated, increased from Gld 12m in 1988 and 1989 to Gld 39m by 1990. Thus, over 90 per cent of total administrative costs of WABM were incurred by the TCA.

In 1990, total administrative costs of WABM amounted to Gld 41m. It seems that administrative costs lagged behind in 1989. Revenues increased steadily, following legislative changes, and the cost ratio fell from 7 per cent in 1988 to 4 per cent in 1989. From 1989 to 1990, the level of administrative costs tripled; the cost ratio went up again from 4 to 7 per cent, probably as a consequence of efforts by the Ministry of Finance to shift part of its expenses to the budget of other public sector agencies.

Table 4.8 Administrative costs of environmental levies WABM (Gld m)

	Ministry (VROM)			TCA(a)	Total WABM		
Year	Staff costs (b)	Outside advisers	Total costs	Admin. costs	Total Costs	Revenue	Cost ratio (%)
1988	0.5	0.6	1.0	12.0	13.0	180	7.1
1989	0.5	0.6	1.1	11.9	13.0	340	3.9
1990	0.7	1.2	1.9	38.6	40.5	570	7.1
1991	0.8	1.6	2.4	.	.	870	.

(a) TCA: Tax and Customs Administration.
(b) Including overhead costs.
Sources: private communication VROM (costs VROM); MvF [a] (TCA costs); VROM [a] (receipts).

4.4.3 Taxation

Tax system
A full presentation of the Dutch tax system would take up too much space[69]. Therefore, only some major properties of the most important taxes are mentioned here. Revenues from all taxes included in the study are presented in table 4.32.

The most important tax, in terms of revenue and number of assessments, is *personal income tax* (PIT), accounting for over 40 per cent of total tax revenues (1990). Over 90 per cent of income tax due is collected through withholding at source by employers (wage tax) and companies (dividend tax). Less than 10 per cent is collected through assessment. Private capital gains are normally not taxed. Up to 1990, the top rate of PIT was no less than 72 per cent, but the tax base was heavily eroded by deductions and exemptions [De Kam 1993, p. 359]. In 1990, a major reform of the income tax system (Oort-legislation, see below) brought down the top rate to 60 per cent, and the number of tax brackets from nine to three.

The second most important tax in the Netherlands is *value added tax* (VAT), which accounts for over one-quarter of total tax revenue. Firms subject to VAT collect VAT from their customers. VAT paid to suppliers may be subtracted from the amount of tax due. The standard rate is 18.5 per cent, the reduced rate (e.g. for food, books, medicines) being 6 per cent.

Another major tax is *corporation (income) tax* (13 per cent of total revenue). The first Gld 250,000 of taxable profits are taxed at 40 per cent, the remainder at 35 per cent.

Tax administration
In the Netherlands, taxes levied by the State[70] are administered by the Tax and Customs Administration (TCA), which is part of the Ministry of Finance. Apart from these taxes, the TCA collects several other levies, notably national social insurance contributions. During the second half of the 1980s and the early 1990s, the Tax and Customs Administration underwent several major reorganisations, which must have caused considerable adjustment costs. Most importantly, new legislation concerning personal income tax and national social insurance contributions was introduced (the so-called 'Oort-legislation'), and the TCA itself was drastically restructured.

During the restructuring of the TCA, which took place from 1987 to 1992, about 30,000 employees in 259 units, spread all over the country, were reorganised into 101 new units [Cnossen 1993, p. 114]. The aim was to increase efficiency and effectiveness of tax administration, to intensify auditing procedures and fraud prevention and to improve relations with the general public. The operation resulted in a more horizontal organisation. Separate units *(inspecties)* for particular taxes

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[69] De Kam [1993] gives a concise but complete overview. For more details, the reader is referred to Te Spenke and Lier [1992].

[70] Local taxes are relatively unimportant in the Netherlands. Revenues amount to less than 3 per cent of receipts from central government taxes.

and different units for levying, auditing and collecting of taxes were integrated within single directorates for Personal Clients, Corporate Business and Small Business respectively. From then on, taxpayers were approached as clearly defined target groups. Every taxpayer deals with one tax unit only. Needless to say, a restructuring on such a large scale is a risky operation. It is, therefore, remarkable that no major problems cropped up, and that tax revenues have been kept up[71].

Another important event has been the introduction of the so-called Oort-legislation, which became operative on 1 July 1989 and 1 January 1990[72]. Dr. Oort was the chairman of a tax simplification commission, which laid the foundations for the new legislation [Oort Commission 1986]. The main change has been the integration of personal income tax and national social insurance contributions, with a combined rate and uniform tax base. The number of tax brackets has been reduced from nine to three, of which the first one is a joint rate for income tax and social insurance contributions. National social insurance contributions, previously paid by employers, are now paid by employees, who are compensated by an extra 'compensation allowance' *(overhevelingstoeslag)* on top of their wage. Apart from these fundamental changes, the treatment of some cost categories with respect to the determination of the fiscal wage or profit has become more complicated. With hindsight, it may be concluded that the political process has done severe damage to the simplification embodied in the original proposals of the Oort commission (section 1.2.4).

The effect of these changes on the costs of the tax administration remains unclear. Adjustment costs may have been considerable, but in the long run administrative costs are supposed to fall, because of improved efficiency following the restructuring of the TCA, and because the number of income tax returns decreased as a consequence of the Oort legislation. Moreover, the removal of internal borders within the European Union (EU) resulted in redundancy for many customs officials, and the transfer of property tax collection to municipalities allowed for another staff reduction. The number of staff has been reduced by 8 per cent from 31,829 in 1989 to 29,230 in 1992 [TCA].

Administrative costs

Administrative costs of taxation may be approximated by the annual expenditures of the TCA. In the Tax and Customs Administration's annual reports, expenditures (on a cash basis) are broken down into different components (e.g. staff, communication, travel) [TCA]. Housing costs are for a large part not paid by the TCA itself, but from the budget of the Ministry of Housing. Only costs reported by the TCA are included here. Table 4.9 breaks down the total TCA budget into outlays for staff and material procurement. These costs are related to all taxes and levies administered by the TCA, not only the taxes considered here. Costs

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[71] See the reports of a task force of an accountancy firm, a firm of management consultants and a research team of the TCA on the process of restructuring [Moret et al. 1990, 1991 and 1992].

[72] For more details on the Oort Commission, -proposals and -legislation, see De Kam [1993].

increased steadily from Gld 2.3bn in 1988 to Gld 2.8bn in 1992. Especially non-staff costs went up, because of substantial investment in computers and automation. Staff costs expanded only moderately, reflecting staff reductions and wage restraint during the period. In 1988, staff costs made up 79.8 per cent of total administrative costs, against 72.6 per cent in 1992. The cost ratio hovered around 1.3 per cent.

Table 4.9 Administrative costs and revenues of the Tax and Customs Administration (Gld m)

	1988	1989	1990	1991	1992
Staff costs	1,820	1,800	1,880	1,950	2,020
Material costs (a)	460	520	600	710	760
Total costs	2,280	2,320	2,480	2,660	2,780
Staff as % of total	79.8	77.6	75.6	73.4	72.6
Revenues (b)	179,600	179,400	187,000	210,300	213,700
Cost ratio (%)	1.27	1.29	1.33	1.26	1.30

(a) Costs of housing are included only in so far as paid through the budget of the TCA.
(b) Including non-tax revenues.
Source: TCA.

As a rule, the administrative costs published in the TCA's annual reports are not attributed to particular taxes. However, there is one exception: the annual report 1989 contains estimates of the administrative costs of particular taxes in 1988. The same table is published in the annual budget of the Ministry of Finance for fiscal year 1990 [MvF a]. In the two following years, the annual budget contained similar estimates of administrative costs in 1989 and 1990. After that, publication of the costs of particular taxes was not continued.

The administrative organisation of the TCA does not permit precise calculations of administrative costs of particular taxes. The figures published by the Ministry of Finance are based on estimated time spent on different taxes and levies. Non-staff costs have been attributed accordingly (table 4.10). Costs not financed through the budget of the TCA but directly related to tax administration (e.g. for housing) are included here, but indirect costs (e.g. those of the legal system) are not.

Because of the reorganisation of the TCA, similar estimates for years after 1990 could not be produced. The annual budget of the Ministry of Finance for fiscal year 1994 [MvF a, p. 131] contains estimates of administrative costs in 1992. These estimates are based on a new model of administrative costs of particular taxes. Therefore, and because of legislative changes concerning personal income tax and wage tax ('Oort') and the removal of internal borders within the EU, the 1992 estimates can not be directly compared with the estimates for 1988, 1989 and 1990.

Table 4.10 shows that administrative costs of individual taxes differ enormously. The most expensive tax to administer is personal income tax, which costs over half a billion guilders annually, about 10 per cent of income tax revenue (wage and dividend withholding taxes excluded). At the other extreme are dividend tax, transfer tax and special tax on automobiles and motorcycles, which cost only around Gld 10m, less than 1 per cent of revenue collected. Clearly, the type of tax

greatly influences its cost-efficiency. The taxes in table 4.10 can be divided according to two criteria: assessment of tax due, and collection.

Table 4.10 Estimates of administrative costs (Gld m) and cost ratios (%) of particular taxes

Tax/levy	Type of tax (a)	Collection (b)	1988 Admin. costs	1988 Cost Ratio	1989 Admin. costs	1989 Cost ratio	1990 Admin. costs	1990 Cost ratio	1992 Admin. costs	1992 Cost ratio
Import duties	t	t	225	10.2	223	9.0	253	9.5	.	.
Value added tax	t	t	235	0.7	237	0.7	249	0.7	373	0.9
Special tax automobiles and motorcycles	t	t	5	0.2	5	0.2	6	0.2	13	0.4
Excise duties	t	t	76	0.9	75	0.8	82	0.8	.	.
Transfer tax (c)	t	t	11	0.7	10	0.6	11	0.7	13	0.6
Tax on motor vehicles	t	d	78	2.5	77	2.4	88	2.4	66	1.7
Personal income tax	v	d	639	9.6	632	11.4	567	10.5	451	7.2
Wage tax	t	t	141	0.4	140	0.4	184	0.4	138	0.2
Dividend tax (d)	t	t	11	0.5	11	0.6	12	0.5	8	0.4
Corporation tax	v	d	191	1.2	198	1.3	213	1.2	434	2.5
Wealth tax	v	d	62	5.9	62	5.5	70	5.7	43	3.1
Succession duty	v	d	25	2.3	24	2.1	25	2.2	41	2.9
Property tax	v	d	87	3.1	85	2.9	70	2.3	.	.
Total			1,780	1.5	1,780	1.5	1,830	1.3	1,580	1.2

(a) Transaction-based (t) or valuation-based (v) taxes (see text).
(b) Collection or payment by third parties (t) or directly by intended taxpayers (d).
(c) Approximated by the proportional part of the costs of all (four) taxes on legal transactions, of which transfer tax is the most important one (1990: 56 per cent of revenue).
(d) 1992: combined figures for dividend and betting tax.
Sources: MvF [a, 1991, 1992 and 1994 issues]. The 1992 issue contains some printing errors; the correct figures have been kindly provided by the Ministry of Finance.

Cnossen [1993, p. 114] distinguishes two categories of taxes: transaction-based and valuation-based taxes. Taxable event and tax base of *transaction-based taxes* are linked to market transactions, like wages paid, sales prices, etc. Taxable event and tax base are, therefore, relatively easy to establish. This is not the case with *valuation-based taxes*, which are not directly linked to market transactions. The determination of taxable profit, for example, is based on a number of rather arbitrary valuations of assets and liabilities. Typical transaction-based taxes are wage tax, VAT, import duties, excise duties, transfer tax, dividend tax and special tax on automobiles and motorcycles. Income tax (mostly on business income), corporation income tax, wealth tax, succession duties (estate tax) and property tax are all valuation-based. Of course, the distinction is not always clear. Some taxes have a mixed nature: in the case of wage tax, for example, valuation problems may arise if part of the wage is paid in kind ('fringe benefits'). On the other hand, valuation of securities with Stock Market quotation in order to determine the amount of wealth tax or succession tax due is fairly easy.

Table 4.10 confirms that transaction-based taxes are cheaper to collect than valuation-based taxes, in line with Cnossen's observation. Of the taxes under study here, transaction-based taxes have cost ratios ranging from 0.2 (special tax on

automobiles and motorcycles) to 9.5 per cent (import duties) in 1990. Import duties are relatively expensive, though, because costs include those made to control border traffic, the main task of the customs. Apart from import duties, the cost ratio of transaction-based taxes does not exceed 2.4 per cent (tax on motor vehicles). This tax, levied on the owner, is also relatively expensive, being transaction-based, but this may be explained by the high costs incurred to prevent evasion. Valuation-based taxes show cost ratios between 1.2 (corporation tax) and over 10 per cent (income tax). Actually, the comparison is clouded by the fact that one-sixth of corporation income tax receipts results from natural gas revenues, resulting in a low cost ratio[73].

The second criterion to divide the taxes in table 4.10 is ease of collection. As shown in section 2.3.1, one way to reduce administrative costs is to use third parties in the collection process. Examples include withholding taxes (wage tax, dividend tax) and taxes where the taxpayer is expected to shift the burden to his customers (VAT, excise duties). In this way, part of administrative costs is shifted to the private sector. Nevertheless, as a result, total operating costs may be reduced, because of increased efficiency. Not accidentally, the taxes collected or paid by third parties in table 4.10 are all transaction-based, because a condition to bring in third parties is that the amount of tax must be relatively easy to establish. The only transaction-based levy not collected or paid by third parties is tax on motor vehicles, which is annually paid by the owner, probably because no third party is readily available. Table 4.10 confirms that taxes collected through third parties are generally cheap to administer for the TCA. Whether this is a consequence of the use of third parties, or because these taxes are all transaction-based, it is difficult to say.

The difference between the two distinctions made in this section - between transaction-based and valuation-based, and between direct collection from intended taxpayers and the use of third parties - is that we may expect that transaction-based taxes are cheap to operate, while the costs of taxes collected or paid by third parties are in part shifted to the private sector, implying that total operating costs may be high after all. Whether this is in fact the case, may be established only after the compliance costs of relevant taxes are quantified as well. For this reason, we return to this issue in Chapter 7.

4.5 Social insurances

4.5.1 General

The social insurance system

In discussing the social security system of the Netherlands, usually a distinction is drawn between social insurances on the one hand, and social provisions on the other. *Social insurances* are financed by compulsory contributions and administered

[73] Cnossen [1993, p. 115].

partly or wholly by employers' and employees' organisations. All of these programmes have one or more characteristics in common with private insurance agreements. Especially in the case of employees' insurances, benefit payments are related to contributions paid (principle of equivalence); there is no means test and hardly any income test. *Social provisions*, on the other hand, are financed out of general revenue, and administered by government agencies; benefit levels are only related to need (solidarity principle), and thus an income test and in many cases a means test applies[74].

We will consider social insurances first. Section 4.6 looks at social provisions. Table 4.11 gives a brief overview of the relevant programmes.

Table 4.11 Survey of social insurance programmes

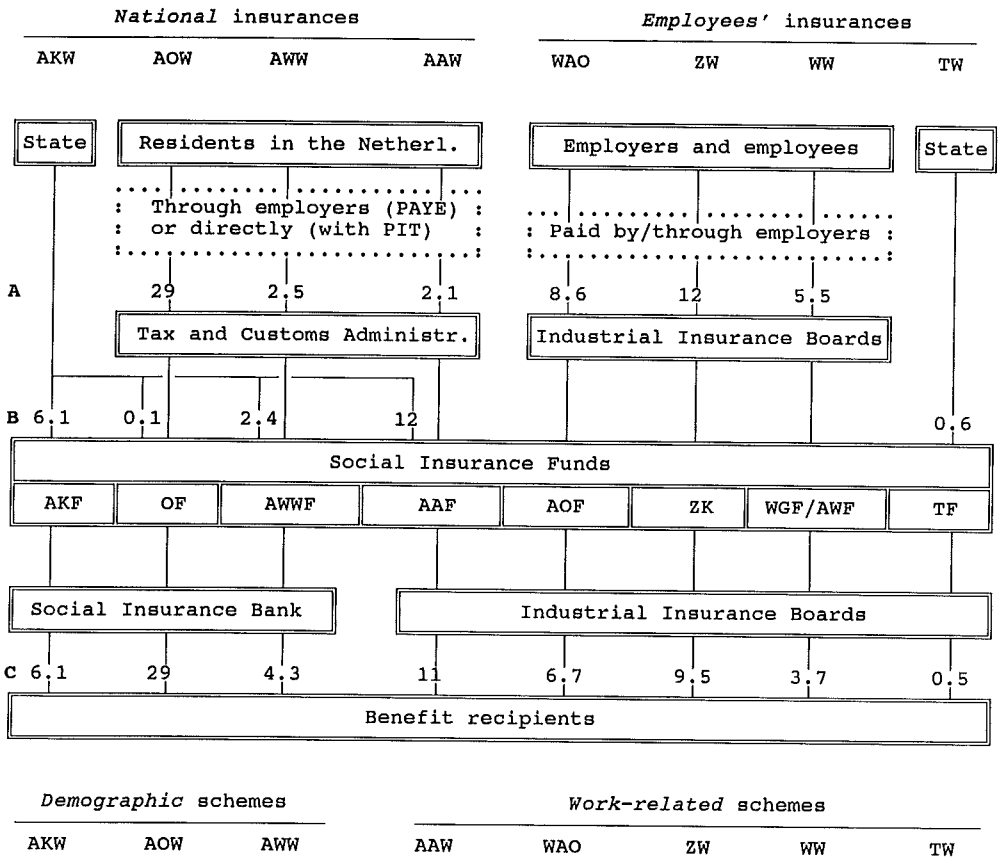
Name	Name in English	Risk covered	Benefit level related to:
National insurances (covering all residents)			
AKW	General Family Allowances Act	Child-care expenses	Number and age of children
AOW	General Old Age Pensions Act	Old age	Minimum wage
AWW	General Widows and Orphans Act	Death of breadwinner	Minimum wage or age (orphans)
AAW	General Disability Benefits Act	Incapacity to work	Minimum wage, degree of disability
Employees' insurances (covering private sector employees only)			
WAO	Disability Insurance Act	Incapacity to work	Last earnings, degree of disability
ZW	Sickness Benefits Act	Sickness	Last earnings
WW	Unemployment Insurance Act	Unemployment	Last earnings
TW	Supplementary Benefits Act	Insufficient employees' insurance benefit	Minimum wage

Being the result of a century of political struggle, the organisation of the Dutch social insurance system is, to say the least, rather complicated. The administration is entrusted to a host of administrative agencies, most of which are jointly managed by representatives of employers' and employees' organisations (e.g. trade unions). Moreover, the organisation is subject to frequent changes, and will remain so in the near future, because a major overhaul of the administration of social security is presently under way. Here, we briefly outline the system, only in so far as is necessary for the analysis of its operating costs. For further details, the reader is referred to De Jong et al. [1990] or SZW [1990]. A list of frequently used abbreviations may be found in appendix D. Two figures are included to help the reader get an overview of the flows of funds involved. Figure 4.1 shows flows of transfers (contributions and benefits), and figure 4.2 shows flows of compensations for administrative costs to the various administrative agencies.

[74] As a consequence of the reform of the Dutch social security system in 1987 (see e.g. De Jong et al. [1990], or Duivenvoorden et al. [1987]), however, this distinction has become less clear. In 1987, a new programme was introduced, which is administered together with social insurances, while being financed out of general revenue: the Supplementary Benefits Act (TW, *Toeslagenwet*). Moreover, as from 1 January 1989, benefits under the General Family Allowances Act (AKW, *Algemene Kinderbijslagwet*), a former social insurance programme, are financed out of government grants instead of contributions. Because both programmes are administered together with the (other) social insurances, by organisations in which employers' and employees' organisations play an important part, we treat them as social insurances here.

In 1990, total benefits amounted to Gld 71bn (figure 4.1). Total administrative costs came to Gld 2.9bn, which equals just over 4 per cent of outlays.

Figure 4.1 Transfers through the social insurance system (a), 1990 (Gld bn)



(a) Two programmes which fall outside the scope of this study, AWBZ and ZFW (both insuring medical expenses; benefits in kind, no cash transfers), have been omitted.

A: Contributions paid by individuals and employers; Gld 60bn.

B: Government grants to social insurance funds (as from 1-1-1989, AKW benefits (family allowances) are financed entirely by the state); Gld 21bn.

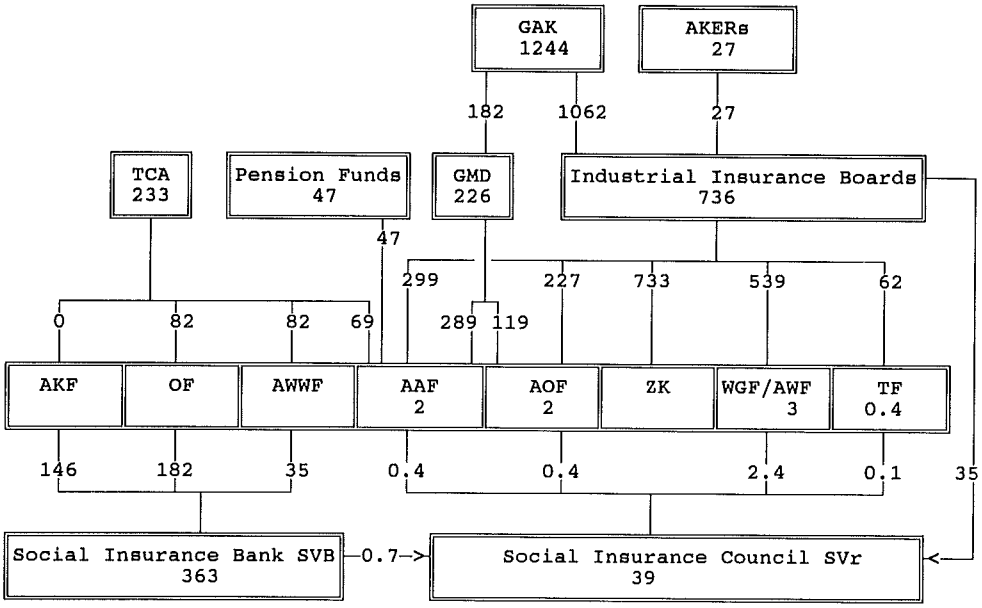
C: Benefit payments; Gld 71bn.

The difference between contributions and grants (A+B) and benefit payments (C), a total of Gld 10bn, consists of administrative costs (Gld 2.9bn), compensation allowances (*overhevelingstoeslag*, section 4.4.3), payments to other social insurance funds, miscellaneous outlays and additions to funds.

A list of abbreviations may be found in appendix D.

Sources: AAF/AOF, AWF, TF, SVB [a] and SVr [c].

Figure 4.2 Flows of compensations to settle administrative costs, 1990 (Gld m)



Figures *within* boxes represent the administrative costs incurred by the relevant organisation; figures *between* boxes represent cost compensations. **All flows originate from the funds**, as all administrative costs are financed directly or indirectly through the funds, and thus from contributions and government grants (compare figure 4.1). A list of abbreviations may be found in appendix D.

Sources: annual reports of industrial insurance boards, GAK, GMD [a], AAF/AOF, AWF, TF, SVB [a], SVr [c].

Social insurance programmes can be split in two ways. First, there are *national* (or *general*) *insurances*, covering all residents, and *employees' insurances*, covering private sector employees only[75]. Second, social insurances can be divided into *schemes covering demographic risks* (old age pensions (AOW), survivors' pensions (AWW) and family allowances (AKW)) and *schemes covering work-related risks* (unemployment (WW), sickness (ZW) and disability (AAW and WAO)).

At the core of the social insurance system are the *social insurance funds*, into which contributions are paid monthly by collecting agents, and out of which benefit payments and administrative costs are financed. The balance of contributions on the one hand and benefits and costs on the other hand is added to the reserves of the funds. The contributions are determined by a pay-as-you-go system. The central government pays grants into the funds from which general insurances are financed; as from 1 January 1989, AKW benefits (family allowances) are financed entirely by the state. Four funds are legal entities (the so-

[75] Civil servants are subject to specific arrangements, which fall outside the scope of this study.

called *central funds*, AAF, AOF, AWF and TF); the others are managed by the administrative bodies which pay out the relevant benefits (Social Insurance Bank and industrial insurance boards, see below).

Schemes covering work-related risks are administered by the *industrial insurance boards*. Presently, there are nineteen of such boards, each covering a different sector of trade and industry. All employers are legally obliged to associate with the board covering their economic sector. The boards are managed by representatives of trade unions and employers' organisations in the relevant sector. The industrial insurance boards collect contributions, award benefits and manage the Redundancy Pay Funds (WGF, *wachtgeldfondsen*) and the Sickness Benefit Funds (ZK, *ziekengeldkassen*). Apart from administering social insurances, the industrial insurance boards run several other programmes, which fall outside the scope of this study (e.g. early retirement (VUT), company pensions). The costs industrial insurance boards incur for administering social insurance schemes are financed from the relevant funds, according to guidelines set by the Social Insurance Council (SVr, see below).

Most (thirteen) industrial insurance boards contract out their administration to the Joint Administration Office (GAK, *Gemeenschappelijk Administratie Kantoor*). GAK also runs several other programmes, like early retirement schemes, which are not part of the social insurance system proper. The administrative costs related to social insurances are billed to the relevant industrial insurance boards. As from 1990, three other boards have joined their field organisations and medical services in the Joint Administrative Body (GUO, *Gemeenschappelijk Uitvoerings Orgaan*). The three remaining boards (still) operate independently.

The industrial insurance boards are advised on social-medical issues related to the implementation of the two disability programmes (AAW and WAO) by the Joint Medical Service (GMD, *Gemeenschappelijke Medische Dienst*), e.g. for determining whether and to what degree an insured individual is disabled. The administration of GMD is run by GAK[76]. GAK bills GMD for administrative costs; GMD bills the disability insurance funds for both its own administrative costs and also for the costs charged to it by GAK.

Programmes covering demographic risks are administered by the *Social Insurance Bank* (SVB), which manages some other schemes too. SVB is steered by a board, the members of which are appointed by the Minister for Social Affairs and Employment, and by employers' and employees' organisations. SVB is responsible for awarding and paying out benefits and for managing the funds from which these benefits are financed (AKF, OF, AWWF). Its administrative costs are also financed through these funds.

Contributions for general social insurances are collected by the *Tax and Customs Administration*, jointly with income tax or wage tax. The TCA bills the relevant funds for its collection costs. Until 1990, the compensation due to the TCA was based on the *extra* work needed to collect the relevant contributions. As of 1 January 1990, wage tax and social insurance contributions are levied jointly (as a consequence of the so-called Oort-legislation, section 4.4.3), which implies

[76] In 1992, GMD and GAK merged.

that *additional* costs could no longer be determined. Since then, 45 per cent of total collection costs of the joint payroll tax is billed to the social insurance funds. The funds have lodged objections against this procedure, because, as a consequence, their share in total collection costs has risen considerably, while the Oort reform was actually meant to simplify the collection process.

Supervision of the social insurance system is entrusted to the Social Insurance Council (SVr, *Sociale Verzekeringsraad*). Members of SVr are appointed by the Minister for Social Affairs and Employment, and by employers' and employees' organisations. Apart from its supervising tasks, SVr is entrusted with several other responsibilities, which include coordination, advice, legislation and the administration of the four central social insurance funds (AAF, AOF, AWF and TF). The costs of running the funds are financed by the funds themselves. The other costs of SVr are charged to the various administrative agencies concerned (table 4.12). Such attributed costs may differ from actual costs made to serve those agencies, but these are unknown. In the remainder of this chapter, attributed SVr costs are included in the costs of the various administrative bodies.

Two agents shown in figure 4.2 have not been mentioned yet: pension funds and AKERs. They are treated below, in section 4.5.2, where the General Disability Insurance Act (AAW) and the Sickness Benefits Act (ZW) are discussed. As from 1 February 1989, the National Audit Office *(Algemene Rekenkamer)* has the authority to also control the social insurance sector. The related costs are not included in our analysis.

Table 4.12 Allocation of administrative costs of SVr to the administrative agencies, 1990

Administrative agencies	Schemes administered	Allocated SVr-costs	
		Gld 1,000	%
Industrial insurance boards	AAW, WAO, ZW, WW, TW	35,000	90
Social Insurance Bank	AKW, AOW, AWW	720	2
General Unemployment Fund	WW	2,400	6
Disability Insurance Fund	WAO	420	1
General Disability Insurance Fund	AAW	420	1
Supplementary Benefit Fund	TW	130	0
Total		39,000	100

Source: SVr [a, 1990, p. 120].

Data sources

Several sources provide information on administrative costs related to social insurances. The industrial insurance boards publish annual reports which contain cost data. The SVr has laid down detailed instructions concerning the breakdown of administrative costs into components (staff, housing, ...) and functions. The breakdown of costs into *components* concerns total administrative costs of the industrial insurance boards. These include expenditures for other programmes than social insurances, which fall outside the scope of this study. The costs of *functions* are related to particular social insurances, making the annual reports of the

industrial insurance boards a most valuable data source. Four functions are discerned:
1 membership administration, collection of contributions
2 benefit administration
3 control, verification
4 policy, management and supervision.
Unfortunately, the boundary between functions 2 (benefit administration) and 3 (control) is not exactly the same for all industrial insurance boards [SVr 1992c, p. 9], which may cloud comparisons to an unknown degree.

The four central insurance funds (AAF, AOF, AWf and TF) publish annual reports too[77]. The other funds are not separate legal entities, consequently they do not publish annual reports. The annual report of the AWF (General Unemployment Fund) has an annex offering information on the redundancy pay funds *(wachtgeldfondsen)*, which are managed by the industrial insurance boards. SVr publishes a yearly review of the sickness benefit funds [SVr c, *Stand ziekengeldverzekering*], which are also managed by the industrial insurance boards. Apart from information about administrative costs, these publications are crammed with data on a host of other issues, like amounts of benefit paid out, number of recipients, etc. Finally, the administrative costs of the demographic programmes can be found in the annual reports of the Social Insurance Bank (SVB). Unfortunately, these reports do not contain any detailed information.

Additional sources are the annual reports of SVr [SVr a], GAK [GAK] and GMD [GMD a, b].

Limitations
The following sections deal with the administrative costs of particular social insurance programmes in the second half of the 1980s. An attempt is made to assess trends in administrative costs over the years, and the distribution of costs over various administrative agencies and functions. It should be kept in mind, however, that in the context of this study, we can do no more than scratch the surface of this extremely complicated subject.

Here, the analysis is limited to *costs*; no attempt is made to assess the *productivity* of programme implementation, or of administrative agencies as such. The reader who is interested in productivity analysis may wish to refer to a series of studies by the Social Insurance Council [SVr 1990, 1991a, 1992a, 1992b, 1992c and 1993][78]. Although already many volumes have been published in this series, no firm conclusions have been reached as yet, because of the extremely complicated subject matter[79].

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[77] AAF and AOF publish a joint annual report.

[78] For a critical discussion, see Ruppert [1991] and De la Combé et al. [1991].

[79] De Groot and Goudriaan [1991] made a less ambitious attempt to assess social insurance productivity. See also section 2.1.3.

Bear in mind also that the quality of available cost figures is rather poor. Expenditures of industrial insurance boards are usually recorded on a cash basis; sometimes capital expenditures are booked wholly as costs in the year of payment. The cost calculation methods of different boards usually don't coincide; costs are sometimes attributed to functions in different ways. Distributive codes used to attribute administrative costs to different social insurance programmes are not based on thorough analyses of underlying administrative processes, thus calculated costs may differ from real costs [SVr 1990, pp. 22, 25 and 26]. Moreover, as noted in the previous section, compensations paid to several administrative bodies (TCA, SVr, pension funds) are based on simple rules of thumb, and will be only remotely related to actual costs. To make matters worse, allocation rules may be subject to change, thus complicating comparisons of costs over various years even further.

It follows, that numbers for administrative costs in the next sections should be considered as best available estimates, not as exact values.

4.5.2 Work-related insurances

Disability insurance

Two social insurance programmes cover the risk of disability. AAW, a *general* social insurance programme laid down in the General Disability Insurance Act, was introduced in 1976. WAO, an *employees'* insurance laid down in the Disability Insurance Act, became effective as from 1967. AAW and WAO are treated together here, because benefits under these programmes are administered jointly; the majority of recipients receive a joint AAW/WAO benefit, and the attribution of total administrative costs to both schemes is artificial [SVr 1992c, p. 19].

An individual is considered disabled if he or she has been continuously incapacitated for work for more than 52 weeks. Benefit received depends on the level of incapacity. If an individual is only partly disabled (say 60 per cent) and out of work, he or she may receive unemployment benefit (WW) for the remaining work capacity (40 per cent). Contrary to disability insurance programmes in other countries, the cause of disability is irrelevant; so coverage is not limited to the so-called 'risque professionel'.

The AAW programme covers all residents. However, eligibility depends on whether in the preceding year a minimum amount of income has been earned. This condition does not apply for students, self-employed and those who became disabled before turning 17. Privately employed workers are compulsory insured through WAO, which supplements AAW benefits up to a percentage of last earnings, with a ceiling. If WAO benefit exceeds AAW benefit, only WAO benefit is paid, while the AAW-component is financed from a separate fund (AAF, see below). Benefits stop when the recipient reaches the age of 65, after which he or she is eligible for an AOW old age pension. Under the AAW, not only cash benefits but also benefits in kind are provided, e.g. invalid carriages, adaptation of the workplace, etc. In 1993, the WAO became much less generous to new enrollees, because outlays had been running seriously out of hand.

The disability insurances are administered mainly by the industrial insurance boards. The boards collect WAO-contributions and award and pay out benefits. Several other organisations are involved as well. AAW-contributions are collected by the Tax and Customs Administration, and subsequently paid into the General Disability Insurance Fund (AAF). WAO-contributions are paid into the Disability Insurance Fund (AOF). The GMD advises on benefit applications. Persons insured under the AAW, who receive a government disability pension, are entitled to AAW-benefit only if that benefit exceeds the government pension. Because AAW-contributions have been paid, government disability pensions paid out are financed through the General Disability Insurance Fund (AAF), which also finances AAW-benefits. This so-called 'fictitious AAW' is administered by the relevant pension funds (ABP, Spf, AMP). These pension funds are compensated for the related administrative costs through the AAF. Cost compensations are based on fixed amounts per beneficiary and per new enrollee; not on actual costs. The amounts are decided upon in negotiations between the pension funds and the AAF. The compensations for the years 1984-89 were actually revised afterwards, with retroactive effect [SVr 1991a, pp. 22-23].

Table 4.13 sets out the administrative costs of AAW/WAO for each of the involved (groups of) organisations. In 1990, the industrial insurance boards incurred 50 per cent of administrative costs. Costs of the Joint Medical Service (GMD) constituted about 40 per cent of the total. The costs of collecting WAO-contributions by the Tax and Customs Administration and the costs of the fictitious AAW administered by pension funds amounted to 7 and 5 per cent, respectively. The costs incurred by the two social insurance funds, AAF and AOF, are negligible. The shares of the organisations involved in total costs have remained remarkably constant over the years. The exception being the compensations to the TCA for collecting AAW-contributions: these increased in 1990 and 1991 for two reasons. First, the introduction of a new formula for cost sharing following the introduction of the so-called Oort-legislation. Second, as from 1989, family allowances are no longer financed from contributions, and consequently TCA-collection costs can no longer be partly charged to the General Family Allowances Fund.

Total costs amounted to more than one billion guilders in 1990. Administrative costs were expanding more rapidly than benefit outlays: the cost ratio increased from 5.3 per cent in 1985 to 6.3 per cent in 1991. One should bear in mind, however, that benefits in kind provided under the AAW are not included in calculating the cost ratio. In 1990, benefits in kind involved outlays in the order of Gld 850m. Including such benefits would reduce the cost ratio from 6.0 to 5.7 per cent in 1990.

Table 4.13 Administrative costs, benefit outlays and cost ratio of disability insurance programmes AAW/WAO (Gld m)

Year	Boards	GMD	TCA	Pension funds	AAF/ AOF	Total costs	Benefit outlays	Cost ratio %
1985	400	310	53	38	3	800	15,000	5.3
1986	410	310	53	39	3	820	15,300	5.3
1987	430	340	52	40	3	860	15,700	5.5
1988	440	360	50	42	3	890	16,000	5.6
1989	460	370	56	45	3	940	16,400	5.7
1990	530	410	69	47	3	1,050	17,500	6.0
1991	550	460	92	50	5	1,160	18,300	6.3

Sources: AAF/AOF, SVr [1991a].

Table 4.14 breaks down total costs by four administrative functions. The industrial insurance boards divide their administrative costs over these functions according to SVr-guidelines. The costs of the GMD, the TCA and the disability funds can be attributed to one function each. The costs of the fictitious AAW administered by pension funds are excluded here, because a similar breakdown can not be made. Benefit administration costs are about equal to control costs, which include medical examinations by the GMD. The collection of contributions absorbs 10 per cent of administrative costs; policy-making, management and supervision together claim 5 per cent of total costs.

Table 4.14 Breakdown of administrative costs of disability insurance programmes AAW/WAO, 1990 (Gld m) (a)

	Boards	GMD	TCA	Funds	Total	%
Membership admin., collection of contributions	30	-	70	-	100	10
Benefit administration	430	-	-	-	430	42
Control, verification	20	410	-	-	430	43
Policy, management and supervision	40	-	-	3	50	5
Total administrative costs	530	410	70	3	1,010	100

(a) Pension funds excluded.
Sources: annual reports of industrial insurance boards, AAF/AOF, SVr [1991a].

Sickness benefits

The Sickness Benefits Act (ZW, *Ziektewet*) became operative in 1967. Sickness benefits are a percentage of last (wage) earnings, and may be claimed for a maximum of 52 weeks. After a year, individuals may apply for disability benefit. Insurance is compulsory for private sector employees, and for persons receiving unemployment insurance benefit (WW). Others may voluntarily participate in the programme. In 1990, only 1.1 per cent of all insured wages was insured voluntarily. Although formally outside the scope of this study, for practical reasons voluntary ZW-insurance will be included in the following cost analysis.

The industrial insurance boards are responsible for the administration of the ZW programme. Every employer is obliged to join a board, according to his

(main) economic activity. Regarding the ZW, three kinds of employers are distinguished:

1 employers who entrust the entire administration of ZW to the board (*omslagleden*; 80 per cent of insured workers);
2 employers who have joined to pool their risks, and for whom the board has formed a separate fund *(afdelingskassen)*. These employers administer ZW together with their employees (2 per cent of insured workers);
3 large employers who bear the risk of sickness benefits themselves (*eigen-risicodragers*; 17 per cent of insured workers).

In every case, the relevant industrial insurance board remains responsible. The boards also manage the Sickness Benefit Funds, which equalise contributions and benefit payments. Employers in groups two and three are known as AKERs *(Afdelings Kassen / Eigen Risicodragers)*. Thus, administrative costs of ZW are not limited to the public sector. Employers do not bear the full costs, however: outlays are financed through ZW-contributions, paid by both employers and employees.

Table 4.15 sets out administrative costs, benefit outlays and cost ratios of ZW in 1985-1991. By far the highest costs are incurred for *omslagleden*, employers who entrust the boards with ZW-administration: over Gld 700m in 1990. Such employers are mostly small and medium-sized firms. Costs incurred by AKERs amounted to Gld 27m in 1990. Thus, in 1990, total administrative costs of ZW amounted to Gld 730m. The cost ratio hovered around 8 per cent in 1985-1991.

Table 4.15 Administrative costs, benefit outlays and cost ratio of sickness benefits programme ZW (Gld m)

Year	Kind of employer (a)			Total costs	Benefit outlays	Cost ratio (%)
	1	2	3			
1985	510	13	8	530	6,400	8.3
1986	540	14	9	560	7,100	7.9
1987	570	13	13	590	7,300	8.1
1988	610	13	13	630	7,700	8.2
1989	630	13	14	660	8,500	7.8
1990	710	13	14	730	9,500	7.7
1991	800	13	15	820	9,500	8.6

(a) Employer (see text): 1 *omslagleden*, 2 *afdelingskassen*, 3 *eigen-risicodragers*.
Source: SVr [c, 1991 issue, pp. 28 and 57].

In table 4.16, administrative costs are broken down with regard to function. The shares of the four functions in total administrative costs have been fairly constant over time. In 1990, paying benefits accounted for half of the costs. Control accounts for about 40 per cent of costs, while the share of the other two functions is small: 5 and 7 per cent, respectively.

Table 4.16 Breakdown of administrative costs of sickness benefits programme ZW, 1990

	Gld m	Percentage
Membership administration, collection of contributions	30	5
Benefit administration	370	50
Control, verification	280	38
Policy, management and supervision	50	7
Total administrative costs	730	100

Sources: annual reports of industrial insurance boards; SVr [c, 1991 issue].

Unemployment insurance

In 1987, a new Unemployment Insurance Act (WW, *Werkloosheidswet*) replaced the then existing programmes that covered the risk of unemployment. Insurance is compulsory for private sector employees. Eligibility and duration of benefits depend on individual employment history; benefits may last between six months and seven-and-a-half years. The amount of benefit is related to last earnings.

WW is administered by the industrial insurance boards and the General Unemployment Fund (AWF). During the first forty days, benefits are normally paid from the Redundancy Pay Fund (WGF), which is run by the relevant industrial insurance board. Thereafter, benefits are financed by the AWF. The administrative costs are split up between AWF and WGF according to a distributive code specified by law.

Table 4.17 sets out the administrative costs of the WW programme since 1987; before 1987 unemployment insurance was organised rather differently. More than 99 per cent of costs are incurred by the industrial insurance boards; less than 1 per cent is related to activities of the General Unemployment Fund (AWF). Total costs amounted to more than Gld 500m in 1990. During 1987-1991, the cost ratio varied between 13 and 15 per cent. Table 4.18 shows the distribution of costs by four functions. Three quarters of costs are made for the administration of benefits. Only 3 per cent is spent on the control function. However, it should be kept in mind that, in practice, the boundary between these functions is not drawn in any consistent way (section 4.5.1).

Table 4.17 Administrative costs, benefit outlays and cost ratio of unemployment insurance programme WW (Gld m)

Year	Boards	AWF	Total costs	Benefit outlays	Cost ratio (%)
1987	450	3	460	3,100	14.9
1988	490	4	500	3,900	12.9
1989	520	3	530	3,800	13.7
1990	540	3	540	3,700	14.7
1991	580	2	580	4,100	14.4

Sources: AWF; annual reports of industrial insurance boards.

Table 4.18 Breakdown of administrative costs of unemployment insurance programme WW, 1990

	Gld m	Percentage
Membership administration, collection of contributions	70	12
Benefit administration	400	74
Control, verification	20	3
Policy, management and supervision	60	11
Total administrative costs	540	100

Sources: AWF; annual reports of industrial insurance boards.

Supplementary Benefits

The Supplementary Benefits Act (TW, *Toeslagenwet*) became effective on 1 January 1987. This programme covers individuals who are compulsory insured against loss of earnings due to unemployment (WW), sickness (ZW) or disability (AAW/WAO). Benefits under these schemes are related to last (wage) earnings. In some cases, benefits received fall short of the so-called *social minimum*, to which every individual is entitled (see section 4.6.2). In these cases, a supplementary benefit can be claimed. TW is financed through general tax revenue.

TW-benefits are administered by the Supplementary Benefits Fund (TF) and the industrial insurance boards. Because (WW-, ZW- or AAW/WAO-) benefit and (TW-) supplement are administered largely simultaneously by the boards, there are joint costs, which must be attributed to the various programmes under consideration. The attribution of administrative costs to TW is laid down in a circular of the Social Insurance Council (SVr); as from 1990 a new arrangement became effective. The prescribed method of cost attribution is not based on a thorough analysis of the underlying administrative process [SVr 1992c, p. 47]. Thus, TW cost figures are rather arbitrary, and comparison over time is not particularly useful. By 1990, total administrative costs amounted to Gld 60m, 14 per cent of outlays.

Table 4.19 Administrative costs, benefit outlays and cost ratio of supplementary benefits programme TW (Gld m)

Year	Boards	TF	Total costs	Benefit outlays	Cost ratio (%)
1987	24	1	25	160	15.0
1988	57	1	58	440	13.0
1989	64	1	64	480	13.6
1990	62	0	63	450	13.8
1991	64	1	65	470	13.9

Sources: TF; annual reports of industrial insurance boards.

Table 4.20 Breakdown of administrative costs of supplementary benefits programme TW, 1990

	Gld m	Percentage
Membership administration, collection of contributions	0	0
Benefit administration	56	89
Control, verification	1	1
Policy, management and supervision	6	10
Total administrative costs	63	100

Sources: TF; annual reports of industrial insurance boards.

4.5.3 Demographic insurances

Old age pensions

The General Old Age Pensions Act (AOW, *Algemene Ouderdomswet*) is a programme which covers the entire population. It came into effect in 1957. Contributions are collected by the Tax and Customs Administration (TCA), together with wage tax or personal income tax. Contributions are a percentage of (taxable) income, with a cap. Individuals without income are not liable to pay contributions, while their pension entitlements are not affected. AOW-pensions are paid out from the age of 65. The benefit level depends on the number of years the individual has been insured, not on previous income, nor on total amount of contributions paid. Pensions are reduced when income was earned without contributions being paid (e.g. by Dutch residents living abroad). The (full) amount of net pension is linked, on a one-to-one basis, to the net minimum wage. Annual outlays for the programme are covered by contributions raised in the same year.

Apart from the collection of contributions, AOW is administered by the Social Insurance Bank (SVB), which has some twenty-plus regional offices all over the country. The administrative costs and the cost compensations charged by the TCA are financed through the Old Age Pensions Fund (OF), which is managed by the SVB.

Table 4.21 sets out the administrative costs of the AOW-programme. In 1990, administrative costs amounted to Gld 260m, or 0.9 per cent of pensions paid. About 30 per cent of administrative costs is claimed by the TCA for collecting AOW-contributions; 70 per cent is incurred by the Social Insurance Bank. The compensation to the TCA for collection costs soared in 1989-1991 because of a new formula for cost attribution (section 4.5.1), and because total (TCA) costs of collecting social insurance contributions could no longer be partly charged to the General Family Allowances Fund, for which, as from 1989, no more contributions were levied.

Table 4.21 Administrative costs, benefit outlays and cost ratio of old age pensions programme AOW (Gld m)

Year	SVB	TCA	Total costs	Benefit outlays	Cost ratio (%)
1985	140	58	200	22,900	0.85
1986	140	53	200	23,700	0.82
1987	150	52	200	24,200	0.82
1988	170	49	220	24,600	0.88
1989	170	67	230	25,400	0.91
1990	180	82	260	29,400	0.90
1991	200	120	320	30,800	1.05

Source: SVB [a].

Widows and orphans'

Since 1959, all residents are insured under the General Widows and Orphans Act (AWW, *Algemene Weduwen- en Wezenwet*). Together with AOW-contributions and wage tax or personal income tax, a percentage of (taxable) income up to a certain ceiling is collected by the Tax and Customs Administration as AWW-contributions. Widows and orphans who fulfil the necessary conditions may claim benefit, the level of which is again linked to the net minimum wage. A widow is granted a pension until she reaches the age of 65, after which she becomes entitled to old age pension (AOW). Following a legal court decision on 7 December 1988, widowers were awarded the same entitlement to AWW-benefits as widows. AWW is administered by the Social Insurance Bank (SVB). The administrative costs incurred by the SVB and costs charged by the TCA are financed from the Widows and Orphans Benefits Fund (AWWF), which is managed by the SVB.

Table 4.22 Administrative costs, benefit outlays and cost ratio of widows and orphans benefits programme AWW (Gld m)

Year	SVB	TCA	Total costs	Benefit outlays	Cost ratio (%)
1985	24	57	80	2,600	3.1
1986	25	52	77	2,700	2.8
1987	28	51	79	2,700	2.9
1988	29	48	77	3,000	2.6
1989	39	68	107	3,200	3.4
1990	35	82	117	4,300	2.7
1991	40	120	160	4,500	3.5

Source: SVB [a].

The administrative costs of the AWW-programme amounted to Gld 120m in 1990 (table 4.22). Collection of contributions by the Tax and Customs Administration takes up 70 per cent of total administrative costs. The remaining 30 per cent is incurred by the SVB. The cost ratio hovers around 3 per cent. In 1989 and 1990, both costs and outlays were considerably higher than in the preceding year, because of the court decision to grant widowers equal rights. Moreover, the compensation

to the TCA rose because collection costs were no longer partly attributed to the General Family Allowances Fund (AKF), and the formula for cost attribution had changed following the introduction of the so-called Oort-legislation.

Family allowances

The General Family Allowances Act (AKW, *Algemene Kinderbijslagwet*), which was introduced in 1963, covers the entire population of the Netherlands. Family allowances depend on the size of the family and the age of the children. Family allowances stop when the children are over 27[80] years of age. For children aged sixteen and over, the insured parent must demonstrate that he or she is paying a designated amount for the maintenance of the child. The child's own income is supposed to be used for its upkeep, and thus may influence eligibility for AKW. Until 1 January 1989, contributions for AKW were collected by the Tax and Customs Administration. As from 1 January 1989, family allowances are financed entirely out of general revenue.

The AKW-programme is administered by the Social Insurance Bank (SVB), which also manages the General Family Allowances Fund. In 1990, administrative costs amounted to Gld 150m, 25 per cent less than in 1985. Two reasons can be given for the drop in costs. Until 1 October 1986, family allowances were also paid for students. Then a new system of study grants was introduced (WSF, see section 4.3.1), which largely replaced the former family allowances. Thus, the number of recipients and benefit outlays fell in 1986 and 1987, and administrative costs dropped too. Then, from 1 January 1989, AKW was no longer financed through contributions, which led again to lower administrative costs.

Table 4.23 Administrative costs, benefit outlays and cost ratio of family allowances programme AKW (Gld m)

Year	SVB	TCA	Total costs	Benefit outlays	Cost ratio (%)
1985	140	57	200	7,500	2.6
1986	130	52	180	7,100	2.6
1987	130	52	180	5,500	3.3
1988	120	48	170	5,700	3.0
1989	170	-	170	5,900	2.8
1990	150	-	150	6,100	2.4
1991	160	-	160	6,400	2.5

Source: SVB [a].

[80] As from 1 October 1991: 24 years.

4.5.4 Total administrative costs of social insurances

Administrative costs in 1990

Table 4.24 summarises the administrative costs of all social insurance programmes included in this study, both by programme and by administrative agency, in 1990 (compare also figure 4.1). Total administrative costs amounted to Gld 2.9bn[81]. Over 80 per cent of total costs are related to work-related schemes. Disability insurances claim 36 per cent of total costs, sickness benefits one-quarter and unemployment insurance one-fifth of total costs.

Most costs are located at the industrial insurance boards: Gld 1.9bn, 64 per cent of total administrative costs. Most of these costs are incurred by GAK, which runs the administration of most of the boards; Gld 27m is incurred by AKERs, employers administering sickness benefits. GMD costs make up 14 per cent of total costs, SVB costs account for 12 per cent, and the costs of the TCA amount to 8 per cent. The share of pension funds and the central social funds in total costs is negligible.

Table 4.24 Breakdown of administrative costs of social insurances by administrative agency, 1990 (Gld m)

	AAW/WAO	ZW	WW	TW	AKW	AOW	AWW	Total	%	Source
Boards	**526**	**733**	**539**	**62**	-	-	-	**1,860**	**64**	1
-GAK	325	386	306	45	-	-	-	1,062	36	2
-AKERs	-	27	-	-	-	-	-	27	1	3
-Own costs (a)	200	320	233	17	-	-	-	771	26	4
GMD	**408**	-	-	-	-	-	-	**408**	**14**	5
-GAK	182	-	-	-	-	-	-	182	6	6
-Own costs (a)	226	-	-	-	-	-	-	226	8	7
Pension funds	**47**	-	-	-	-	-	-	**47**	**2**	8
TCA	**69**	-	-	-	-	**82**	**82**	**233**	**8**	9
SVB (a)	-	-	-	-	**146**	**182**	**35**	**364**	**12**	10
Central funds (a)	**3**	-	**3**	**0**	-	-	-	**7**	**0**	11
Total	**1,053**	**733**	**543**	**63**	**146**	**264**	**117**	**2,918**	**100**	
%	36	25	19	2	5	9	4	100		

(a) Including cost attribution of Social Insurance Council (SVr).

Sources: 1: Annual reports 1990 industrial insurance boards; 2: GAK (1990 issue); 3: SVr [c, 1990 issue]; 4: Difference (1-2-3); 5: GMD [a, 1990 issue] or AAF (1990 issue); 6,7: GMD [a, 1990 issue]; 8: AAF (1991 issue); 9: SVB [a, 1990 issue] and AAF/AOF (1990 issue); 10: SVB [a, 1990 issue]; 11: 1990 issues of AAF/AOF, AWF and TF.

[81] Apart from the administrative agencies already discussed, the Ministry of Social Affairs and Employment incurs costs related to social insurances (policy making and supervision). These costs may be roughly estimated at Gld 10m (in 1990, expenses of the Directorate General of Social Security of the ministry amounted to Gld 62m, while the staff occupied with social insurances is in the proportion of 3 to 16 to the staff occupied with social provisions [SZW a]).

Table 4.25 shows the distribution of administrative costs of work-related social insurances by function. Benefit administration is the most expensive function, causing over 50 per cent of total administrative costs. Control takes up about one-third of total costs, the other two functions each take up less than 10 per cent. The cost structure of various programmes differs considerably, however. The costs of control make out about 40 per cent in the case of disability and sickness insurances, but only 3 per cent in the case of unemployment benefits, and 1 per cent for supplementary benefits. A major reason behind this difference is the high level of costs of medical examinations which are needed to establish whether claimants are entitled to sickness or disability benefit, and to help revalidate benefit recipients and help them return to work. Unemployment benefits are relatively short-termed; the caseload flow is high, which may explain the large cost share of benefit administration.

Table 4.25 Breakdown of administrative costs of work-related social insurances by function, 1990 (a)

	AAW/WAO	ZW	WW	TW	Total
Gld m					
Membership administr., collection of contributions	100	30	70	0	200
Benefit administration	430	370	400	56	1,250
Control, verification	430	280	20	1	730
Policy, management, supervision	50	50	60	6	160
Total	1,010	730	540	60	2,340
Cost shares (%)					
Membership administr., collection of contributions	10	5	12	0	9
Benefit administration	42	50	74	89	53
Control, verification	43	38	3	1	31
Policy, management, supervision	5	7	11	10	7
Total	100	100	100	100	100

(a) Costs of fictitious administration of AAW by pension funds are excluded because of lack of data.
Sources: see previous sections.

Trends in administrative costs, 1985-1990

Tables 4.26, 4.27 and 4.28 show the development of administrative costs of social insurance programmes over the period 1985-1990. Table 4.26 presents administrative costs by programme. Between 1985 and 1990, total costs increased by 35 per cent. The costs of two programmes have increased above average: unemployment insurance (+51%) and of widows and orphans benefits (+46%). Administrative costs related to the family allowances programme actually fell between 1985 and 1990 (-25%). Most of these trends may be explained by legislative changes[82]. The rise of administrative costs of the WW programme and the introduction of the TW programme increased the share of the social insurance boards in total costs from 59 per cent in 1985 to 64 per cent in 1990 (table 4.27). The cost increase experienced by the remaining administrative agencies was below average.

Table 4.26 Trends in administrative costs of social insurance programmes, 1985-1990

	AAW/WAO	ZW	WW	TW	AKW	AOW	AWW	Total
Gld m								
1985	800	530	360	-	200	200	80	2,160
1986	820	560	390	-	180	200	77	2,220
1987	860	590	460	25	180	200	79	2,400
1988	890	630	500	58	170	220	77	2,540
1989	940	660	530	64	170	230	110	2,700
1990	1,050	730	540	63	150	260	120	2,920
Index 1985 = 100 (TW: 1987 = 100)								
1985	100	100	100		100	100	100	100
1986	103	106	108		94	100	96	103
1987	108	112	127	100	94	102	98	111
1988	112	119	138	232	87	111	95	118
1989	118	125	147	258	85	119	133	125
1990	132	138	151	250	75	136	146	135
Cost shares (%)								
1985	37	25	17	-	9	9	4	100
1986	37	25	17	-	8	9	3	100
1987	36	25	19	1	8	8	3	100
1988	35	25	20	2	7	9	3	100
1989	35	24	20	2	6	9	4	100
1990	36	25	19	2	5	9	4	100

Sources: see previous sections.

[82] The costs of unemployment benefits rose sharply in 1987 because of a legislative change, which brought unemployed previously covered by a different unemployment scheme (WWV) under the (new) WW-programme. The costs of the AWW were raised by a court decision to grant widowers the same rights as widows (1989), and by the increase of the compensation to the TCA for collecting contributions (because of the financing of family allowances from general revenue (1989), and the Oort-legislation (1990)). The administrative costs of AKW decreased because, as from 1986, students receive WSF instead, and because, since 1989, no contributions are levied.

Table 4.27 Trends in administrative costs of social insurance programmes (a), by administrative agency, 1985-1990

	Boards	GMD	Pension funds	TCA	SVB	Central funds	Total
Gld m							
1985	1,280	310	38	220	300	8	2,160
1986	1,360	310	39	210	300	6	2,220
1987	1,500	340	40	210	310	7	2,400
1988	1,620	360	42	200	320	8	2,540
1989	1,710	370	45	190	370	7	2,700
1990	1,860	410	47	230	360	7	2,920
Index 1985 = 100							
1985	100	100	100	100	100	100	100
1986	106	100	103	94	100	85	103
1987	117	110	105	93	102	98	111
1988	127	116	111	87	106	101	118
1989	134	120	118	85	124	93	125
1990	146	132	124	104	122	92	135
Cost shares (%)							
1985	59	14	2	10	14	0	100
1986	61	14	2	10	13	0	100
1987	62	14	2	9	13	0	100
1988	64	14	2	8	13	0	100
1989	64	14	2	7	14	0	100
1990	64	14	2	8	12	0	100

(a) AAW, WAO, ZW, WW, TW, AKW, AOW and AWW.
Sources: see previous sections.

Administrative costs of work-related insurance programmes rose by 42 per cent (table 4.28). Cost increases differed per function, however. The costs of administering benefits and collecting contributions rose by about 50 per cent between 1985 and 1990. The costs of control grew below average; their share in total costs fell from 34 per cent to 31 per cent.

Table 4.28 Trends in administrative costs of work-related social insurance programmes (a), by function, 1985-1990

	Membership administration, contributions	Administering benefits	Control, verification	Policy, management, supervision	Total
Gld m					
1985	140	840	560	110	1,650
1986	140	920	560	110	1,730
1987	170	1,000	610	130	1,900
1988	180	1,080	640	150	2,040
1989	180	1,140	680	150	2,150
1990	200	1,250	730	164	2,340
Index 1985 = 100					
1985	100	100	100	100	100
1986	104	109	100	100	105
1987	123	119	109	111	115
1988	129	128	115	128	124
1989	134	135	121	134	130
1990	149	149	130	146	142
Cost shares (%)					
1985	8	51	34	7	100
1986	8	53	32	7	100
1987	9	53	32	7	100
1988	9	53	31	7	100
1989	8	53	32	7	100
1990	9	53	31	7	100

(a) AAW, WAO, ZW, WW, TW; costs of fictitious administration of AAW by pension funds are excluded because of lack of data.
Sources: see previous sections.

4.6 Social provisions

4.6.1 General

This section looks into income transfers under the National Assistance Act (ABW, *Algemene Bijstandswet*) and two related programmes, IOAW and IOAZ. These social provisions are financed out of general revenues, not through contributions. Responsibility for supervising the administration lies with the Ministry of Social Affairs and Employment. Programme administration is entrusted to the municipalities. Because of lack of sufficiently detailed data, and because of the similarity of the ABW, IOAW and IOAZ programmes, these schemes are treated together here. First, characteristics and administration of each provision are described; then the available data on administrative costs are presented.

4.6.2 Programmes

The National Assistance Act (ABW) became law in 1965. The programme is intended as a 'safety net' for all residents (Dutch nationals and foreigners allowed to reside in the Netherlands) without sufficient means of living. ABW-benefit may be claimed by individuals whose own resources (income or assets) are not sufficient to provide for essential needs (food, housing, clothing, heating, furniture and recreation), or if assistance offered under other public programmes (e.g. social insurances) falls short. The money, which is deemed necessary to provide for one's basic needs, is called the 'social minimum'. The social minimum is calculated as a percentage of the net statutory minimum wage, depending on age and household composition. Under special circumstances, additional benefits may be claimed (exceptional assistance, *bijzondere bijstand*, e.g. for the purchase of a washing machine or a pair of glasses, if these expenditures cannot be met by standard national assistance benefit). Sometimes, non-material services are provided.

For groups of ABW-recipients, who need assistance for a specific reason, special schemes can be established, with special conditions. The most important of these programmes is the State Group Regulations for Unemployed Persons (RWW, *Rijksgroepsregeling Werkloze Werknemers*). RWW, which was also introduced in 1965, is meant for unemployed persons who do not (any longer) qualify for benefit under the Unemployment Insurance Act (WW). Benefit levels are similar to those of ABW-general; entitlement is dependent on being registered with the local job centre and individual effort to find employment. A similar programme is laid down in the Self-Employed Assistance Decree (BZ, *Bijstandsbesluit Zelfstandigen*), which came into force in 1987. Benefit levels, application procedures and benefit administration of these special schemes are very similar to those of AWB-general. Therefore, from here the term 'ABW' includes the RWW and BZ-programmes.

In 1987, two schemes were introduced to cover persons in need of income support, and for whom it was especially difficult to (re-)integrate into the labour market, because of age or (limited) capacity to work. The IOAW-programme *(Wet Inkomensvoorziening Oudere en gedeeltelijk Arbeidsongeschikte Werkloze werknemers)* covers elderly and partly disabled workers. Elderly and partly disabled formerly self-employed are covered by the IOAZ-programme *(Wet Inkomensvoorziening Oudere en gedeeltelijk Arbeidsongeschikte gewezen Zelfstandigen)*. The main difference between IOAW and IOAZ, on the one hand, and ABW on the other hand, is that IOAW and IOAZ-benefits are only income-tested, whereas ABW takes assets into account as well. This implies that under the ABW-programme, individuals may be forced to spend their savings and sell or mortgage their house before they are eligible for benefit. Benefit levels, conditions and application procedures of ABW, IOAW and IOAZ are similar. Their administration is entrusted to the municipalities.

4.6.3 Administrative costs

Social provisions are administered by the municipalities, of which there are over 600. Larger municipalities employ special administrative departments, called municipal social service (GSD, *gemeentelijke sociale dienst*); in small municipalities, the department of social affairs runs the administration of social provisions. The State compensates the municipalities partially (90 per cent) for the administrative costs (and benefit outlays) of these programmes through the Municipality Fund *(Gemeentefonds)*. This compensation is not based on actual costs, but is related to the number of benefit recipients.

It is difficult to estimate administrative costs of social provisions, because of the great number of municipal social services and departments of social affairs involved, and especially, because these organisations have more responsibilities than administering social provisions: they also offer various kinds of non-material assistance. Moreover, the administration of social provision programmes is usually not entrusted to identifiable sections of the organisation. Estimates of total administrative costs of municipal social services and departments of social affairs are available from several sources, but these estimates are not always comparable. Total administrative costs of ABW, IOAW and IOAZ combined are published by the Netherlands Central Bureau of Statistics (CBS, *Centraal Bureau voor de Statistiek*). It should be kept in mind, however, that these figures are all based on municipal files, which might have been organised in rather different ways. Consequently, some costs might be included by some municipalities and excluded by others. Also, researchers may include various categories of costs, usually without specification. Moreover, the available sources only provide *expenditure* figures, not *costs*.

The longest time-series available is published by the Central Bureau of Statistics [CBS c]. Based on data as supplied by all municipalities, the joint administrative costs of ABW, IOAW and IOAZ are published. The distribution of these costs over particular programmes is not known. Earlier CBS-research shows that clients covered by different schemes claimed different amounts of time from social service workers [Boswinkel and De Wit 1983], which suggests that costs per client may differ between programmes. However, IOAW and IOAZ are relatively unimportant schemes: of all recipients of ABW, IOAW and IOAZ together, only 3 per cent are covered by IOAW or IOAZ.

Table 4.29 sets out the administrative costs of ABW, IOAW and IOAZ in 1980-1990, according to CBS-data. Staff costs amount to about 77 per cent of total administrative costs, a percentage that has been rather stable over the past decade. In the first half of the 1980s, both benefit outlays and number of recipients rose dramatically, as a consequence of the serious economic recession. Administrative costs fell behind because of tightened budgets. As a result, the cost ratio and costs per client fell by more than 30 per cent. The social services concentrated their activities on benefit administration; non-material assistance was reduced considerably.

After 1984, administrative costs rose somewhat more rapidly than benefits paid out and number of recipients, but a cost ratio as high as was found for 1980

(9.9 per cent) has never been reached again. Administrative costs reached another peak in 1987, the year of the reform of the social security system *(stelselherziening)* when the IOAW and IOAZ-programmes were introduced. Around 1990, the level of administrative costs seems to have stabilised at around one billion guilders.

Table 4.29 Administrative costs (a), benefit outlays, and cost ratio of ABW, IOAW and IOAZ programmes (b), 1980-1990

Year	Staff costs (Gld m)	Other costs (Gld m)	Total costs (Gld m)	Benefit outlays (c) (Gld m)	Number of recipients (1,000)	Cost ratio (%)	Costs per recipient (Gld)
1980	460	140	610	6,100	360	9.9	1,670
1981	450	120	580	7,100	400	8.1	1,450
1982	480	130	610	8,600	470	7.2	1,310
1983	540	160	700	10,300	590	6.8	1,180
1984	570	180	750	12,100	670	6.2	1,130
1985	610	200	810	11,100	600	7.3	1,340
1986	680	190	860	11,300	600	7.6	1,450
1987	770	240	1,010	11,800	600	8.6	1,670
1988	740	220	960	12,000	620	8.0	1,560
1989	710	230	940	11,700	610	8.0	1,540
1990	760	250	1,010	11,100	570	9.5	1,760

(a) Expenditures on a cash basis.
(b) Until 1987 (introduction IOAW and IOAZ): ABW.
(c) Including exceptional assistance.
Sources: CBS [c] and CBS [1991].

Besides CBS-figures, estimates are available from several alternative sources. Table 4.30 compares the available data. The first alternative source is the report of a management consultancy firm, which estimated (total) administrative costs of municipal social services [KPMG 1988][83]. The KPMG-study included 41 medium-sized municipalities (20,000-50,000 inhabitants). Average costs per client amounted to Gld 1,370 per year in 1983; the cost ratio was 6.6 per cent. Staff costs made up 77 per cent of total administrative costs. Costs per client are somewhat higher than those given by the CBS (Gld 1,180 in 1983). However, comparison is difficult because the CBS-figures include only administrative costs of ABW[84], while KPMG included other programmes, like the then existing WWV[85].

Van der Drift et al. [1986] estimated administrative costs of social services in 47 large municipalities (over 50,000 inhabitants), again in 1983. Average costs per client amounted to Gld 1,700, a rather higher figure than found by KPMG (Gld 1,370) and CBS (1,180), which, at first glance, suggests that costs per client

[83] For a summary, see Fouarge and Petit [1986].

[84] IOAW and IOAZ were introduced in 1987.

[85] WWV was another major scheme administered by the municipalities, which has been integrated in the Unemployment Insurance Act (WW) since 1987.

increase with the size of municipalities. Regression analysis, however, does not suggest that scale is in any way related to administrative costs. Costs were found to be mainly determined by the number of clients; low costs per client were found at social services which had more clients per staff member, a higher level of automation and a more flexible organisation. Interestingly, a number of factors which intuitively should influence the cost level were found to be *not* related to administrative cost levels: the distribution of recipients over different programmes, efforts to prevent fraud, and the amount of non-material assistance offered.

Twice, the secretariat of the Council for Municipal Finance (RGF, *Raad voor de Gemeentefinanciën*) has estimated the administrative costs of national social provision programmes. In 1985, the administrative costs of the ABW-programme were estimated by subtracting the costs related to the WWV-programme from total administrative costs of municipal social services [RGF 1985b]. The study included 88 municipalities of all sizes. Estimated costs per client in 1981, 1982 and 1983 exceed CBS-estimates (table 4.30); the estimate for 1983 is higher than that of KPMG and below that of Van der Drift et al. Costs per client fell dramatically between 1981 and 1983. This is explained by the strong growth in the number of recipients (compare table 4.29) caused by the economic depression, and because of budget cuts, which forced municipal social services to reduce their activities to the absolute minimum, and which stimulated efficiency-improving measures.

In a new study [RGF 1990], data from 108 municipalities were used to estimate administrative costs of social services in 1986-1989. This time, costs related to the WWV-programme (which had been in existence up until 1987) had not been subtracted. Staff costs accounted for about 78 per cent of total costs, which was similar to the CBS and KPMG outcomes. Costs per client increased in the period under study, while the number of clients fell by 20 per cent, mainly because the WWV-programme was abolished (1987). Whether economies of scale play a role, has not been studied. Curiously, total costs of the social services under study have not fallen while the number of clients has decreased by one-fifth. Some possible explanations are offered (the increasing complexity of regulations, the increasing number of long-term recipients or improved service to clients), but the reason behind this apparent anomaly has not been studied in any detail. CBS-figures, from which WWV is excluded, are at comparable levels for 1986 and 1987, but then drop to lower levels in 1988 and 1989.

Summarising, the exact administrative costs of social provisions incurred by municipalities are not known, but cost figures published by the CBS can not be disputed on the basis of available alternative evidence. Thus, the costs of ABW, IOAW and IOAZ to municipalities probably amounted to Gld 1,010m in 1990. Costs incurred at the Ministry of Social Affairs and Employment (policy-making, supervision) may be roughly estimated at Gld 50m[86]. This brings our total estimate to Gld 1,060 in 1990.

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[86] Expenses of the Directorate General of Social Security amounted to Gld 62m in 1990, while the staff, occupied with social provisions, is in the proportion of 16 to 3 to the staff occupied with social insurance programmes. See footnote in section 4.5.4.

Table 4.30 Available estimates of administrative cost of municipal social services per client (Gld)

Year	CBS [c]	KPMG [1988]	Van der Drift et al. [1986]	RGF [1985b]	RGF [1990]
	ABW, IOAW, IOAZ	Total costs (medium-sized municipalities)	Total costs (large municipalities)	Total costs minus WWV	Total costs
1981	1,450			2,010	
1982	1,310			1,650	
1983	1,180	1,370	1,700	1,510	
1984	1,130				
1985	1,340				
1986	1,450				1,510
1987	1,670				1,660
1988	1,560				1,710
1989	1,540				1,710
1990	1,760				

4.7 Comparison of social insurance and social provision programmes

Because of the large number and the great variety of social security programmes analysed in this chapter, it is difficult to keep track of the larger picture. This section provides an overview of all administrative costs considered up to now.

Table 4.31 shows that the administrative costs of all social security programmes considered here amounted to Gld 4.0bn in 1990. Over 50 per cent of administrative outlays are related to two clusters of programmes: disability programmes (AAW/WAO) and national assistance and related programmes (ABW/IOAW/IOAZ), which both require about one billion guilders. Programmes covering sickness (ZW) and unemployment (WW) cost Gld 700m and Gld 500m, respectively. Demographic programmes and supplementary benefits (TW) are relatively cheap to administer (Gld 60m - 260m).

In order to make the various programmes more comparable, costs may be related to output measures. In the preceding sections, costs have already been related to outlays, by way of the cost ratio. Another yardstick for output is number of benefit years: the number of benefits paid out weighted by benefit duration (three benefits paid out during four months each, together count as one benefit year).

In 1990, a total of Gld 82bn was paid out; this amounted to 5.9m benefit years (on a population of 15m). The average cost ratio was 4.8 per cent; average costs per benefit year amounted to Gld 670. The differences between programmes are huge: cost ratios vary between 0.9 and 14.7 per cent, costs per benefit year between Gld 80 and Gld 3,300.

Table 4.31 Administrative costs of social insurances and social provisions, 1990

	AAW/ WAO	ZW	WW	TW	AKW	AOW	AWW	ABW(a) IOAW/-Z	Total
Administr. costs (Gld m)	1,050	730	540	60	150	260	120	1,060	4,000
Benefit outlays (Gld m)	18,000	9,500	3,700	450	6,100	29,000	4,300	11,000	82,000
Benefit years (1,000)	780	350	160	100	1,810	1,960	190	600	5,900
Cost ratio (%)	6.0	7.7	14.7	13.8	2.4	0.9	2.7	9.5	4.8
Costs per benefit year (Gld)	1,400	2,100	3,300	660	80	140	630	1,800	670
Benefit duration (b)	l	s	s	m		l	l	l	

(a) Benefit outlays of ABW, IOAW and IOAZ are *before* social insurance premiums, outlays of social insurances *after*. This makes comparisons difficult.
(b) Short (s), medium (m) or long (l).
Sources: SZW [b, 1992 issue] (benefit years); see text (rest).

In section 2.1.2, a number of factors have been identified which may be expected to influence the level of administrative costs. Two such factors, which are relatively easy to establish, may help understand the relative cost differences between programmes: caseload flow and programme complexity. Because many different factors are at work at the same time, the available data does not admit the determination of *causality*. All we can do is check whether factors supposed to cause high costs are in fact related to a high cost level, and vice versa.

The first determinant of the cost level is *caseload flow*, the number of entrants and exits in a given period. Programmes characterised by low caseload flow are expected to require relatively low administrative costs, because the number of new enrollees, who normally are more demanding administratively than individuals already registered, is relatively small. Several yardsticks to measure caseload flow are conceivable. Here, we use the ratio of the number of benefit years and the total number of benefits during the year[87]. This ratio represents *benefit duration*, the part of the year during which the average recipient receives benefit (e.g. a ratio of 0.5 implies an average benefit duration of six months). Because of data imperfections, only three levels of benefit duration are distinguished: short, medium and long[88]. The table shows that average benefit duration is short (below 0.3) for sickness benefits (ZW) and unemployment benefits (WW) and long (over 0.7) for disability benefits (AAW/WAO), old age pensions

[87] The number of *benefits* paid out during the year is not equal to the number of *individuals* receiving benefit, because an individual may receive a) more than one benefit at the same time, and b) several benefits under the same programme in the same year (e.g. because of two periods of sickness).

[88] Unfortunately, the available data on number of benefits and benefit years of the various programmes are not based on uniform definitions, and for some programmes they are no more than estimates, which is typical of the fragmented administration of social security in the Netherlands, and the lack of elementary data. Thus, such volume measures are no more than rather rough indicators of magnitude. Because of lack of data, benefit duration of ABW/IOAW/IOAZ could not be calculated. It seems reasonable, however, to assume an average benefit duration of over 0.7 (long).

(AOW), widows and orphans benefits (AWW) and national assistance and related programmes (ABW/IOAW/IOAZ). Programmes with relative short benefit duration are assumed to be relatively expensive to administer.

A second possible determinant of administrative costs is *programme complexity*, which is reflected in criteria for entitlement and benefit levels. Thus, programmes for which entitlement is difficult to establish (e.g. involving medical examinations) should be relatively expensive to administer. When benefit levels are simply related to (net) minimum wage or number and age of children (demographic programmes, ABW and TW), they may be expected to be less costly than programmes paying benefits that are related to last earnings, which must be established in each individual case (employees' insurances). Applying an income- or means-test may also increase costs.

The administration of disability programmes (AAW/WAO) is the second most expensive of all: Gld 1,050m. The cost ratio, 6 per cent, is not extremely high, because of relatively generous benefit levels. Costs per benefit year are high at Gld 1,400. This may be explained by the high expenditures related to medical examinations (40 per cent of the total, see table 4.14), and by the link between benefit levels and previous income (WAO). Caseload flow is relatively low, however (long average benefit duration).

The case of sickness benefits is quite different: average benefit duration is very short, which may offer an important explanation for the high costs per benefit year (Gld 2,100).

The highest cost ratio (14.7 per cent) and highest costs per benefit year (Gld 3,300) are found with the unemployment benefits programme WW. Benefit duration is short, and establishment of entitlement and calculation of benefit level are complicated (dependent on employment history and related to previous earnings, respectively). Moreover, recipients are obliged to check with the administrative agency on a regular basis.

In quantitative terms, the supplementary benefits programme (TW) is a relatively unimportant scheme. About Gld 450m is paid out in a total of 100,000 benefit years. The benefit level is relatively low, because it comes on top of another benefit. The result is a high cost ratio: almost 14 per cent. Costs per benefit year amount to Gld 660. This seems rather high, considering the fact that entitlement is relatively easy to establish and benefit duration is not short. Moreover, no insurance contributions are collected, and costs of control and verification are virtually non-existent, because these are already made with respect to the 'base' benefit which TW supplements. Perhaps the reason for the relatively high cost level must be sought in the rather arbitrary way in which administrative costs are attributed to the TW-programme (section 4.5.2).

The family allowances programme AKW is one of the cheapest programmes in operation. Costs per benefit year amount to only Gld 80. Entitlement and amount of benefit are easy to establish (dependent on amount and age of children[89]). Moreover, no contributions are collected (any more). Because the benefit level is relatively low, the cost ratio is still at 2.4 per cent. Because, at the

[89] In a few cases, children's own income may influence the benefit level.

time, benefit had to be applied for every three months, average benefit duration is no meaningful measure here.

By far the largest social security programme is the old age pensions scheme AOW. In 1990, over Gld 29bn was paid out, related to two million benefit years. Yet, administrative costs amounted to no more than Gld 260m, 0.9 per cent of outlays. Costs per benefit year amounted to Gld 140. The AOW programme is characterised by long benefit duration, and easily established entitlements.

The widows and orphans benefits programme AWW is relatively small in size: 190,000 benefit years. Benefit duration is long, and entitlement rather easy to establish. The cost ratio is low at 2.7 per cent, and costs per benefit year are moderate.

National assistance and related programmes (ABW/IOAW/IOAZ) pays out Gld 11bn annually, which makes it one of the largest programmes. Average benefit duration is long. Yet, both the cost ratio (9.5 per cent) and costs per benefit year (Gld 1,800) are high. This should, at least in part, be attributed to programme complexity, which includes a full means test and extremely complicated conditions for entitlement.

Thus, we may conclude that relatively straightforward programmes with long benefit duration, like the demographic insurances (AKW, AOW and AWW), are indeed relatively cheap to administer, while programmes with short benefit duration (sickness, unemployment) require considerably more administrative outlays per benefit year or per benefit guilder. Relatively costly medical examinations raise administrative costs in the case of sickness benefits (ZW) and disability insurance (AAW/WAO). Moreover, programme complexity is related to high administrative cost levels in the case of unemployment insurance (WW) and national assistance and related programmes (ABW/IOAW/IOAZ).

4.8 Total administrative costs

Table 4.32 summarises the administrative costs of all tax-benefit programmes analysed in this chapter. In 1990, total administrative costs amounted to some Gld 6bn. Two thirds of total costs, Gld 4bn, are associated with social security programmes; collecting taxes and levies requires almost Gld 2bn, 30 per cent of the total, while the administrative costs of subsidies amount to less than 4 per cent of total costs: Gld 220m. The five (clusters of) programmes which are the most expensive to administer (costs exceeding Gld 0.5bn) account for two thirds of total costs, while the seven least expensive programmes considered here account for less than 1 per cent of costs.

The overall costs ratio comes to 2.7 per cent. The average cost ratio of social security programmes amounts to 4.8 per cent; for subsidies the cost ratio is 3.2 per cent and for taxes and levies 1.4 per cent.

Table 4.32 Administrative costs of all tax-benefit programmes considered, 1990

	Administrative costs		Revenue/outlays (a)		Cost ratio
	Gld m	% of total	Gld m	% of total	%
Subsidies					
IPR	4.2	0.1	280	0.1	1.5
INSTIR (1992)	4.0	0.1	100	0.0	3.8
PBTS (1992)	8.1	0.1	100	0.0	7.8
IPZ	0.4	0.0	110	0.0	0.4
WSF	80	1.3	4,100	1.8	1.9
TS (1989)	19	0.3	450	0.2	4.2
IHS	110	1.8	1,800	0.8	6.1
Total subsidies	220	3.7	6,900	3.0	3.2
Taxes and levies					
Radio and TV licence fee	34	0.6	840	0.4	4.0
Environmental levies WABM	40	0.7	570	0.2	7.1
Import duties	250	4.1	2,700	1.2	9.5
Value added tax	250	4.1	38,000	16.6	0.7
Special tax on automobiles and motorcycles	6	0.1	2,600	1.1	0.2
Excise duties	82	1.3	9,700	4.3	0.8
Transfer tax	11	0.2	1,700	0.7	0.7
Tax on motor vehicles	88	1.4	3,700	1.6	2.4
Personal income tax	570	9.3	5,400	2.4	10.5
Wage tax	180	3.0	49,000	21.5	0.4
Dividend tax	12	0.2	2,300	1.0	0.5
Corporation tax	210	3.5	17,000	7.6	1.2
Wealth tax	70	1.1	1,200	0.5	5.7
Succession duty	25	0.4	1,200	0.5	2.2
Property tax	70	1.1	3,100	1.3	2.3
Total taxes and levies	1,900	31.2	140,000	61.0	1.4
Social security					
AAW/WAO	1,100	17.3	18,000	7.7	6.0
ZW	730	12.0	9,500	4.1	7.7
WW	540	8.9	3,700	1.6	14.7
TW	63	1.0	450	0.2	13.8
AOW	260	4.3	29,000	12.9	0.9
AWW	120	1.9	4,300	1.9	2.7
AKW	150	2.4	6,100	2.7	2.4
ABW/IOAW/IOAZ	1,100	17.3	11,000	4.9	9.5
Total social security	4,000	65.1	82,000	35.9	4.8
Overall	6,100	100	230,000	100	2.7

(a) Taxes and levies: revenues; subsidies and social security: outlays.

4.9 International comparisons

Having quantified administrative costs of tax-benefit programmes in the Netherlands, the question arises as to whether these costs are high or low according to international standards. Such international comparisons, however, are fraught with danger, and largely outside the scope of this book. Evidently, the structure of tax-benefit systems of different countries varies considerably. Nevertheless, cost figures from some other countries are presented here, so as to place our results in an international context. In order to make cost figures somewhat more comparable internationally, costs are expressed as a percentage of total benefit outlays or tax collected (cost ratios). Recall, however, that cost ratios as such are poor measures of efficiency (section 3.3.1). Moreover, they are evidently highly dependent on tax rates or benefit levels.

4.9.1 Taxation

Administrative costs of some major taxes in the Netherlands are compared with those in W-Germany and the UK. In Germany, the Netherlands' most important trade partner, taxes are administered at a rather decentralised level. Bauer [1988] estimated administrative costs in 1979, 1981 and 1983, based on research in two states (Bavaria and Nordrhein-Westfalen). Cost figures for the UK are presented by Sandford et al. [1989]. They are based on publications of the tax authorities. Unfortunately, those figures apply to different years. For the Netherlands, we use cost figures applying to 1990. In 1988 and 1989, cost ratios were at about the same level (table 4.10).

Table 4.33 Comparison of administrative cost ratios of major taxes: Netherlands, Germany, UK (%)

	Netherlands 1990	W-Germany 1983	UK 1986/87
PIT, wage tax	1.38	1.64	.
PIT, wage tax, premiums (a)	1.02	.	1.53
VAT	0.66	1.73	1.03
Corporation tax	1.23	0.95	0.52
Total taxation	1.20 (b)	1.87	1.16

(a) National social insurance contributions, levied by tax administration.
(b) Exclusive of local rates, which are relatively unimportant in the Netherlands.
Sources: MvF [a, 1992 issue, p. 109], Bauer [1988, p. 386] and Sandford et al. [1989, p. 192].

Table 4.33 compares cost ratios of total taxation, and of three major (clusters of) taxes, which together account for over 80 per cent of total tax collected in each country considered. It would seem that the Dutch tax administration operates at relatively low cost, when outlays are expressed as a percentage of revenues. Cost ratios of both personal income tax and related taxes and (especially) VAT are below those in Germany and the UK. The costs of corporation income tax in the Netherlands are relatively high, though. Considering all taxes together, cost ratios

in the Netherlands and the UK seem to be at similar levels, while in Germany, the cost ratio is higher. The German estimates apply to 1983, however; productivity may have improved since then.

Table 4.34 compares cost ratios of VAT in thirteen countries in the mid-1980s. The data are compiled by the OECD (except for West Germany and the Netherlands, for which no data were available at the time). The data are supplied by member countries, but figures have not been calculated on a consistent basis between countries. Cost ratios vary between 0.32 per cent (Norway) and 1.73 per cent (Germany). The Netherlands take up a middle position with a cost ratio of 0.65 per cent.

Table 4.34 Administrative cost ratios of VAT in OECD countries, 1985

Country	Cost ratio (%)
Norway	0.32
Sweden	0.35
France	0.4
Finland	0.41
Italy	0.49
New Zealand	0.49 (a)
Netherlands	**0.65** (b)
Denmark	0.69
United Kingdom	0.95 (c)
Luxembourg	0.99
Portugal	1.0 (d)
Ireland	1.08
Belgium	1.09
W-Germany	1.73 (e)

(a) Administrative costs are for 1987, revenue is 1987-88 estimate.
(b) 1988.
(c) Administrative costs are for 1986, revenue for 1985.
(d) 1986, Customs authorities excluded.
(e) 1983.
Sources: Germany: Bauer [1988, p. 386]; Netherlands: MvF [a, 1991 issue, p. 105]; other countries: OECD [1988, p. 204].

4.9.2 Social security

The variation in national social security systems might well exceed the rich variety of national tax systems. Obviously, a detailed comparative study of administrative costs of benefit programmes in various countries is outside our scope. Instead, we present estimates of *total* administrative costs of social protection in the member countries of the European Union (EU), as published by Eurostat [1993]. Social protection includes a host of programmes; it is a much wider concept than social security as used in this book. Eurostat-figures are based on national account data and have been made comparable as much as possible. Still, some programmes may be counted in by some countries and left out by others. Only current transactions are included; capital transactions and fiscal expenditures are not.

Table 4.35 shows that Dutch benefit outlays, measured as a percentage of GDP, exceed those of any other member country. In the Netherlands, benefit outlays amount to 31 per cent of GDP, against 19 per cent in Portugal, and 24 per cent in the EU as a whole. Cost ratios range from 2.7 per cent to 6.2 per cent. In the Netherlands, the cost ratio is at exactly the EU average of 3.8 per cent.

Table 4.35 Comparison of administrative costs of social protection in the European Union, 1990 (a)

	Benefit outlays		Administrative costs	
	ECU bn (b)	% of GDP	ECU bn	% of benefit outlays
Spain	76.6	20	2.07	2.7
Denmark	29.4	29	.87	3.0
Germany	307.0	26	9.72	3.2
Luxembourg	1.8	25	.06	3.2
Belgium	38.2	25	1.34	3.5
Netherlands	**68.8**	**31**	**2.60**	**3.8**
Italy	196.6	23	7.72	3.9
Greece	9.2	19	.36	3.9
France	249.2	27	10.31	4.1
Ireland	6.6	19	.30	4.6
United Kingdom	168.8	22	7.94	4.7
Portugal	7.5	16	.46	6.2
Total	1,160	24	44	3.8

(a) Greece: 1989.
(b) In 1990, ECU 1 equalled Gld 2.31 (average).
Source: Eurostat [1993, pp. 18-19 and 72-73].

5

Compliance costs to business

Having estimated administrative costs, we now turn towards compliance costs. This chapter quantifies compliance costs to business, and in Chapter 6 we go into compliance costs to households. After describing the methodology applied, we present the results of our business survey. In this chapter, compliance costs are analysed by (sub)groups of firms. Aggregate compliance costs are related to firm characteristics, and broken down into components and particular programmes. First, for all firms together, then for subgroups of firms. Thus, the distribution and the incidence of compliance costs may be analysed, both of which we find to have important economic consequences. Finally, results are compared with those of earlier research, and our conclusions are summarised.

5.1 Methodology

This section discusses the mail survey used to gather data on compliance costs incurred by firms. Words like business, firm and enterprise are used interchangeably; they refer to legal entities which, whether for profit or not for profit, are involved in activities that give rise to costs of compliance with regulations concerning money transfers to and from the public sector (i.e. taxation, social security and subsidies).

5.1.1 Sampling design

The sample was drawn from the national database of the Chambers of Commerce, which holds information of about 600,000 organisations, for profit and not for profit. This was the best available source. Unfortunately, though, not all public utilities, self-employed and associations are included. Notably, only 15 per cent of all agricultural enterprises are covered, and those included are not representative for the entire agricultural sector. So, we decided to exclude agricultural firms from the survey altogether. Another drawback of the database is that it includes associations and foundations which neither pay taxes nor receive subsidies, and therefore fall outside the scope of this study. And so, we decided to exclude associations and foundations without employees from the sample. Businesses registered after December 31st, 1988, were also left out, because all questions relate to the full year 1989.

After these preliminary actions, 583,000 businesses remained. From this universe, a stratified sample was drawn. Foreign studies have shown that compliance costs vary with economic sector and firm size. One of the aims of the survey is to establish whether such systematic variation also exists in the Netherlands. In order to analyse compliance costs for different size groups and

economic sectors, the sample was stratified by sector and number of employees, using data as registered by the Chambers of Commerce. An additional advantage of stratification is that more accurate results (lower variance of estimated mean compliance costs) can be expected.

The sample was stratified in such a way that the statistical reliability of mean compliance costs could be expected to be identical in every subsample, assuming identical response rates and coefficients of variation[90]. This procedure resulted in an over-representation of large firms in the sample, because otherwise no reliable results for this group could be presented. The total sample of firms consisted of 5,393 entities.

5.1.2 Questionnaire

Particular care was given to questionnaire design, so as to stimulate completion of the form. The number of questions was kept at a minimum, and questions were formulated as clear and as precise as possible. Advice was sought from staff members of the Ministry of Economic Affairs, the Ministry of Finance and the central employers and business organisations. In addition, a pilot survey was held among ten small and three large firms. Subsequent discussions with members of the employers and business organisations' joint study group for Simplification of Administrative Rules *(RCO-werkgroep Vereenvoudiging Administratieve Regelgeving)* have improved the final version of the questionnaire[91].

All questions relate to 1989, or the most recent financial year, if the latter did not coincide with the calendar year. As the sample was drawn from a universe of legal entities, questions relate to those entities, which do not always coincide with economic entities, as in the case of groups or holdings.

The questionnaire starts off with some general questions which are easy to answer, concerning economic sector, legal form, turnover range, total labour costs and the presence of an owner/manager or unpaid spouse or other co-working family members. Respondents are also asked to estimate the burden of compliance costs on their firm compared with other firms.

This general part of the questionnaire is followed by two questions about the firm's administration. Information is solicited about the costs of the firm's administration and payments to outside advisers, accountants and administration offices.

The following questions, 9 and 10, make up the core of the questionnaire. Previous studies on business compliance costs have shown that it won't do to just ask about amounts spent on compliance costs (section 3.2.3). Most respondents will have no more than a faint notion of what is covered by the concept of compliance costs. Therefore, compliance costs have to be itemized. For each type of tax, five cost components are identified: time spent by the owner/manager, time spent by the

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[90] Full details on (sub)sample size determination are presented in appendix A3.

[91] The full questionnaire and accompanying letters are reprinted in Allers [1990b, appendix 3].

spouse or other family members (unpaid), staff costs, costs of outside advisers, accountants, etc., and other costs. Because precise figures can not always be given, estimates have been asked. In the questionnaire, compliance costs are defined as 'all costs the firm would not have incurred in the absence of taxes, social insurances, subsidies and environmental levies'.

Wage tax and social insurance contributions are treated here as one single payroll tax, because it is not possible to distinguish the separate activities these programmes give rise to. Such payroll taxes are normally calculated simultaneously.

Apart from questions about the compliance costs of each tax, the amount of tax paid is also asked. The remaining questions concern applications for subsidies (question 13), the obligatory supply of information about third parties to the tax and social security authorities (concerning e.g. clients, suppliers, account holders; question 14) and the costs of adjusting to legislative changes (question 15). Regulations concerning taxes, social insurances and subsidies are notorious for being frequently changed. Therefore, such adjustment costs are a structural part of compliance costs. Adjustment costs are part of compliance costs asked for in questions 9, 10, 13 and 14, but in question 15 respondents are asked to estimate these costs separately.

The questionnaire is concluded by space for comments, an indication of completion time and - for respondents who did not prefer to remain anonymous - a statement of name, address and telephone number.

5.1.3 Non-response reply postcard

It was anticipated that a large proportion of the firms in the sample would not be willing to complete the questionnaire. Other surveys on compliance costs generally show response rates below 50 per cent. Completion of the questionnaire takes a considerable amount of time. Many firms find they are already flooded with all kinds of official and unofficial questionnaires. Moreover, some questions are difficult to answer because no administration is kept of compliance costs as such. Finally, most businesses are not especially keen on disclosing financial information which might somehow find its way to competitors or to the tax authorities.

When a low response rate is expected, a large sample can be chosen in order to obtain an absolute number of reactions sufficiently large for analysis. This, however, is not enough. It is imperative to investigate whether non-response is somehow related to the subject of the survey, i.e. compliance costs. If, for example, firms with high compliance costs are less inclined to participate in the survey, the results of the survey will be downwardly biased. Therefore, the selectivity of non-response has to be investigated.

Research shows that many non-respondents can be persuaded to answer just one question, if they know they will then not be bothered any more [see Bethlehem and Kersten 1986, p. 273]. Generally, surveys revolve around one central question. Other questions generate mostly background variables. By having non-respondents

only answer this central question it can be established whether the response is biased.

Unfortunately, our central question - what are the compliance costs of taxes, social insurances and subsidies - can not be put to respondents directly, because the concept of compliance costs has a different meaning for different respondents, if they are familiar with it at all. In a German study (a mail survey of 100 firms) it was found that, on average, respondents estimated their firm's compliance costs at 50 per cent of actual costs, because they were simply not aware of all costs involved [Klein-Blenkers et al. 1980, p. 50].

Therefore, we asked non-respondents to *estimate* compliance costs for their firm *compared with other firms*, that is, their perception of the relative burden of compliance. This question was printed on the non-response reply postcard, which was added to the second reminder, and which was aimed at respondents who did not want to participate in the survey. The question could be answered simply by ticking a box on the postcard. The same question is asked in the first part of the full questionnaire, before the various components of compliance costs are identified. If we find that the perception of relative compliance burdens is related to the actual level of compliance costs, and if this perception is different for respondents and non-respondents, it follows that the results are indeed biased one way or another.

Apart from the relative compliance burden, we asked non-respondents the reason for not participating.

5.1.4 Survey

The postal survey among 5,393 firms was held in April/June 1990. This was expected to be the most convenient time: between the busy period of balancing the books and the summer holidays. Apart from a questionnaire, the selected firms received an accompanying letter, a letter of recommendation from the coordinating employers' and business' organisation RCO *(Raad van de Centrale Ondernemings-organisaties)*, instructions on how to complete the questionnaire, a reply-paid postcard and a reply-paid envelope.

The accompanying letter explained the aim of the study. It also mentioned that the survey was financed partly by the employers' organisation NCW and the Ministry of Economic Affairs, and that the four central employers' and business' organisations supported the study. It was pointed out that the Minister of Economic Affairs would present the results of this study to Parliament *(Tweede Kamer)* and that, therefore, the results might have some influence on government policy-making in this field. A low response rate, it was hinted in this letter, suggesting a lack of interest in the issue of compliance costs on the part of the business sector, might therefore be undesirable. Particular care was taken not to encourage respondents to exaggerate compliance costs, however.

In order to maximize the response rate, confidentiality was assured and firms were given the opportunity to participate anonymously. Respondents who chose not to reveal their identity were asked to return a separate reply-paid

postcard, stating the name of their firm. Much attention was given to the appearance of the materials; letter, questionnaire and envelope were printed in two colours, using the university logo.

In the accompanying letter and on the cover of the questionnaire, a telephone number was given in case respondents needed additional information. Many respondents took this opportunity, mostly to ask specific questions about the completion of the questionnaire.

Two reminders were sent at three-week intervals. The final reminder was accompanied by a second copy of the material in the first mailing, but with a different reply postcard.

5.1.5 Response

The sample contained 5,393 firms. However, 141 of these were found to be out of frame, which left us with a net sample of 5,252 (table 5.1). From 884 firms, reply postcards, letters or telephone calls were received informing us that they were unwilling or unable to complete the questionnaire. In 678 cases, a reason was given (table 5.2), and in 607 cases the question about the estimated relative compliance burden was answered (section 5.1.3).

Table 5.1 Business survey: response

	Number of firms	%
Gross sample	5,393	
not known at address	81	
out of scope of study	12	
no longer in existence	48	
Net sample	5,252	100
questionnaire inadequately completed	63	1
usable questionnaires	1,053	20
unwilling to complete questionnaire	884	17
of which answered non-response question	*607*	*12*
no reaction	3,252	62

A total of 1,116 questionnaires were returned, of which 1,053 were usable (20 per cent of net sample size, 0.18 per cent of business population)[92]. The best response rate was obtained from large firms. Nearly 60 per cent of all respondents chose not to reveal their identity. Completion time ranged from 10 minutes to 18.5 hours, the average being 76 minutes. Large firms usually needed more time than smaller ones.

[92] In an earlier publication, preliminary results were presented [Allers 1990a, b]. These were based on 719 usable questionnaires returned at the time. Interestingly, results changed only marginally when more completed questionnaires became available after this publication.

Table 5.2 Stated reasons for not completing the questionnaire

	Number of firms	%
No time, not interested	430	63
Unwilling to release data	5	1
Data not available	48	7
No data because member of group/holding	87	13
'Not applicable to our organisation'	62	9
Merged, taken over	46	7
Total	678	100

5.1.6 Comparison of survey response with business population

After weighting the sample of 1,053 firms by economic activity and size class (in terms of number of employees), the survey sample can be compared with the universe. Table 5.3 shows that the distribution of responding firms by legal form compares very well with the overall firm population.

Table 5.3 Comparison of response and business population by legal form (%)

Legal form	Response group	Population
Public limited companies *(NV)*	1.4	1.1
Private limited companies *(BV)*	31.1	35.5
Partnerships *(VOF)*	11.2	7.4
Limited partnerships *(comman. vennootschappen)*	1.3	0.6
Co-operative societies *(coöperatieve verenigingen)*	2.0	1.0
One-man businesses *(eenmanszaken)*	46.9	48.8
Associations *(verenigingen)*	1.8	2.1
Foundations *(stichtingen)*	3.9	3.5

Source: Kamers van Koophandel [1989]

By grossing-up the sample we arrive at a total of 3.96 million employees, which is 7.7 per cent below the actual number of employees in the population (4.27m)[93]. Total gross wage costs computed from survey data amount to Gld 232bn, 4.8 per cent above the population figure (Gld 221bn)[94]. These differences seem satisfactorily small. Unfortunately, the response to question 12, the amount of taxes paid, was disappointing, which makes a meaningful comparison with total tax revenues impossible.

[93] Total number of jobs, excluding agriculture and social insurance and government sector [CBS 1992, pp. 47-53].

[94] Total gross wages and salaries according to National Accounts; agriculture and fisheries, government administration, social insurance sector and defense excluded [CBS a, 1992 issue, p. 110].

5.2 Aggregate compliance costs and firm characteristics

As was indicated in section 5.1.1, the survey sample has been stratified by economic activity and firm size (as measured by number of employees). Results of earlier studies indicate that these variables are related to the level of compliance costs. If this is also the case in our sample, weighting of results by economic sector and number of employees will be necessary. This chapter investigates the link between compliance costs on the one hand, and sector and number of employees on the other hand. Due to missing values, the number of cases observed is not constant (700 respondents provided all necessary compliance cost data; of these, 679 also provided the number of employees. See appendix A1.3).

5.2.1 Firm size

Both level of compliance costs and number of employees are ratio-level variables, so we may use Pearson's R as a measure of association. Tables 5.4 and 5.5 show correlation coefficients (Pearson's R) and their significance (based on the assumption of normality). Table 5.4 indicates that, with 99.9 per cent confidence, compliance costs are positively correlated with number of employees, except in the case of personal income tax, which only applies to small firms.

Table 5.4 Correlation of compliance costs and number of employees

	R	Significance (a)	N
Payroll taxes	.59	**	910
Value added tax	.43	**	888
Corporation tax	.61	**	914
Personal income tax	-.06		939
Dividend tax	.30	**	954
Excise duties	.11	**	954
Environmental levies	.27	**	909
Import duties	.33	**	951
Property tax	.39	**	822
Subsidy applications	.29	**	989
Information supplied regarding third parties	.10	**	985
Aggregate compliance costs	.78	**	679

(a) Significance: * 99%, ** 99.9%.

Aggregate compliance costs are also positively correlated with number of employees for subgroups of firms. Table 5.5 shows this to be the case for various economic sectors, repair shops (most of which are small) being the exception, and for all legal forms except limited partnerships (only four cases in the sample). *Within* size groups, however, compliance costs are not significantly correlated with number of employees, except for the largest firms (500 or more employees) and, with somewhat lower confidence, for the smallest firms (less than five employees).

Table 5.5 Correlation of aggregate compliance costs with number of employees for subgroups of firms

	R	Significance (a)	n
Economic sector			
Manufacturing/mining	.78	**	109
Construction/installation	.69	**	119
Trade	.97	**	107
Hotels/catering	.46	**	47
Repair shops	.11		28
Transport/communication	.61	**	63
Banks/insurance/commercial services	.46	**	60
Other services	.40	**	146
Number of employees			
0-4	.24	*	101
5-9	.05		67
10-19	.21		88
20-49	-.00		138
50-99	-.12		113
100-499	.20		126
500+	.71	**	46
Legal form			
Public limited companies (NV)	.86	**	25
Private companies (BV)	.73	**	396
Partnerships (VOF)	.59	**	38
Limited partnerships (com.venn.)	.75		4
Co-operative societies (coöp.ver.)	.84	**	13
One-man businesses (eenmanszaken)	.31	*	81
Associations (verenigingen)	.79	**	22
Foundations (stichtingen)	.49	**	96
All firms	.78	**	679

(a) Significance: * 99%, ** 99.9%.

The relationship between aggregate compliance costs and number of employees can also be analysed with the help of a contingency table and associated statistics. These statistics are non-parametric, which means that a normal distribution is not presupposed. Appendix C discusses briefly the interpretation of the measures of association that we present below.

Using the level of aggregate compliance costs as a criterion, the sample can be subdivided into five groups. These quintals are cross-tabulated with number of employees, and several measures of association are calculated (table 5.6). The table shows that there is a positive relationship[95].

[95] A Chi-square test confirms that with 99.9 per cent confidence, the variables are connected. Kendall's Tau is significantly positive with 99.9 per cent confidence, which indicates a tendency for the cases to fall near the major diagonal. Gamma is .59: if one firm belongs to a larger size class than another firm, the probability that it also belongs to a higher compliance cost class is almost 80 per cent.

We may safely conclude then that firm size, measured by number of employees, is positively related to the level of compliance costs, whether normality is assumed or not. Because large firms are over-represented in the sample, the data must be weighted by number of employees. The fact that *within* size groups aggregate compliance costs are not correlated with number of employees (except in the smallest and the largest size group; table 5.5) underlines that our stratification by number of employees has been fairly successful.

Table 5.6 Aggregate compliance costs cross-tabulated with number of employees

Number of employees	Aggregate compliance costs (quintals) 1 (low)		2		3		4		5 (high)		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
0-4	65 +	64	19	19	10 —	10	6 —	6	1 —	1	101	100
5-10	14	21	25 +	37	18	27	8	12	2 —	3	67	100
10-19	24	26	26	27	24	26	17	18	3 —	3	94	100
20-49	14 —	10	40 +	28	39 +	27	35	24	17 —	12	145	100
50-99	14 —	12	20	18	26	23	33 +	29	21	18	114	100
100-499	7 —	5	10 —	8	23	18	33	25	58 +	44	131	100
500+	0 —	0	1 —	2	1	2	8	17	38 +	79	48	100
Total	138	20	141	20	141	20	140	20	140	20	700	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence; absolute values of adjusted residuals exceed 1.96, see Everitt [1980, p. 46-8]).
Chi-Square: 382, 24 degrees of freedom, significance 99.99%
Kendall's Tau C: .51, significance 99.99%
Gamma: .59

5.2.2 Economic sector

Because economic sector is a nominal-level variable, Pearson's R is now not an appropriate measure of association. Instead we use a contingency table and associated statistics. Table 5.7 sets out the distribution of firms over sectors and aggregate compliance costs quintals. A Chi-square tests confirms with 99.9 per cent confidence that aggregate compliance costs and economic sector are related. Asymmetric lambda is .13, which means that our ability to predict the aggregate compliance costs group of a firm improves by 13 per cent once we know to which sector the firm belongs.

Table 5.7 Aggregate compliance costs cross-tabulated with economic sector

	Aggregate compliance costs (quintals)											
	1 (low)		2		3		4		5 (high)		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Manufact./mining	9 —	8	13 —	11	28	24	25	22	40 +	35	115	100
Construc./installn	12 —	10	21	17	25	21	31	26	32	26	121	100
Trade	17	16	16	15	33 +	31	22	20	20	19	108	100
Hotels/catering	13	27	12	25	7	14	13	27	4 —	8	49	100
Repair shops	9	32	10 +	36	5	18	4	13	- —	-	28	100
Transport/commun.	9	14	12	19	13	21	13	21	16	25	63	100
Banks/ins./com.serv.	18	28	17	27	10	16	9	14	10	16	64	100
Other services	51 +	34	40 +	26	20 —	13	23	15	18 —	12	152	100
Total	138	20	141	20	141	20	140	20	140	20	700	100

Percentages marked + or — differ significantly from other categories (with 95 per cent confidence).
Chi-Square: 100, 28 degrees of freedom, significance 99.99%
Cramer's V: .19
Lambda: .13 (compliance cost class dependent variable)

5.2.3 Conclusion

Both firm size and economic sector appear to be systematically related to compliance costs. Therefore, the survey data will be weighted by both variables.

5.3 Compliance costs: all firms

In the previous section it was concluded that the survey data must be weighted by both firm size and economic sector. This section presents weighted results. First, aggregate compliance costs are discussed. Then, costs are presented by type of tax-benefit programme, and by nature of costs. In order not to create a false sense of precision, figures have been rounded. The analysis is based on the total sample of 1,053 firms, instead of only the 700 firms with no missing values which were used above. The treatment of missing data is described in appendix A1.3.

5.3.1 Aggregate compliance costs

Size and frequency distribution
Mean compliance costs of tax-benefit programmes per firm amounted to Gld 12,400. Firms vary widely in their compliance costs. For the firms covered in this survey, they range from zero to over Gld 3m per year.

By multiplying mean costs per firm by the total number of firms, aggregate compliance costs of the Dutch business sector may be calculated at Gld 7.2bn. That is 1.5 per cent of gross domestic product, 3 per cent of the wage sum and 4 per

cent of taxes and social security contributions paid by or through firms, respectively.

Figure 5.1 Frequency distribution of aggregate compliance costs (dotted line shows normal distribution)

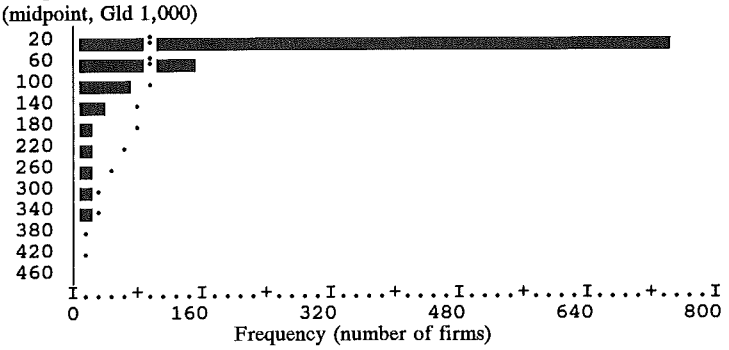

Figure 5.1 shows the frequency distribution of aggregate compliance costs. It is obvious that this distribution exhibits a marked positive skewness. Compliance costs are not distributed normally, which means that statistics based on the assumption of normality (e.g. confidence intervals) should only be used with extreme caution.

It is helpful, though, that the Central Limit Theorem states that, whatever the distribution of a variable, the *mean* of that variable is approximately distributed normally, provided n, the sample size, is sufficiently large. The required sample size depends on the distribution of the variable. A very skewed distribution requires a sample of at least one hundred elements [Moors 1991, p. 52]. Our sample size easily exceeds this minimum threshold, implicating that confidence intervals may be used. However, for subgroups of firms n can fall short of one hundred; in such a case the reader will be alerted.

Because of the wide variation of compliance costs between firms, absolute figures tend to give a false sense of precision. Therefore, upper and lower limits will be given, based on the 95 per cent confidence intervals. Upper and lower limits are indicative of the range wherein the actual figures are likely to fall. The 95 per cent confidence interval for mean annual compliance costs per firm ranges from Gld 10,200 to Gld 14,400; for all firms the interval ranges from Gld 6.1bn to 8.4bn guilders.

The next sections examine the magnitude of possible biases of these results. It will be demonstrated that biases are unlikely to push aggregate compliance costs out of the confidence interval.

Non-response bias

Our results are based on 20 per cent of the total sample. Regrettably, 80 per cent of the firms did not respond, even after two reminders. It is quite possible that compliance costs of non-respondents differ systematically from those of respondents. Therefore, an attempt has been made to assess possible non-response

bias (section 5.1.3). Firms that did not wish to participate were asked to answer one question only: *'What would be your estimate of the burden of compliance costs of taxes, social insurances, applications for subsidies and environmental levies on your firm, compared with other firms?'*. The question could be answered simply by ticking one of five boxes on a reply postcard, ranging from low to high. The same question was part of the questionnaire.

Results for both respondents and non-respondents are weighted by number of employees and economic activity. This was possible because the data base of the Chambers of Commerce, from which the sample was drawn, contains information on these variables. It is possible, however, that this information is somewhat out of date in some cases, but it is unlikely that this should seriously affect results.

Table 5.8 demonstrates that non-respondents generally consider themselves more heavily burdened than respondents. Significantly more respondents than non-respondents consider themselves to be moderately burdened, whereas the proportions of non-respondents considering themselves heavily and very heavily burdened are significantly larger than the proportions of respondents who think so.

Table 5.8 Perception of relative compliance burden of respondents and non-respondents, and mean costs per respondent (weighted)

Perception of compliance burden	Non-respondents n = 571	Respondents n = 1038	Mean costs per firm (Gld 1,000)
1 (low)	17%	21%	4
2	12%	14%	8
3	−28%	+39%	14
4	+25%	−18%	18
5 (high)	+19%	− 9%	19
Total	100%	100%	12.4

Percentages marked + or − differ significantly from other category (with 99 per cent confidence).
Chi-square: 55, 4 degrees of freedom, significance 99.99%
Kendall's Tau C: -.15, significance 99.99%
Gamma: -.21

The question which now remains is, are *perceptions* of relative burdens at all related to *actual* compliance burdens? Section 5.1.3 states that many firms have no more than a faint notion of the compliance costs they incur. To probe this question, the sample has been divided into five groups of firms according to the level of aggregate compliance costs. These quintals were cross-tabulated with estimated relative compliance burdens. Next, several measures of association were calculated (table 5.9). The Chi-square test confirms that these variables are not independent. The largest deviations exist in the highest and the lowest compliance cost class. Kendall's Tau is significantly positive, which indicates a tendency for the cases to fall near the main diagonal: a higher estimated relative compliance burden is likely to be matched by higher aggregate compliance costs. However, this relationship proves not to be as strong as might be expected. The last column of table 5.8 shows that mean aggregate compliance costs of respondents increase with estimated

relative compliance burdens. The means in the four lowest cost-perception groups (1 to 4) differ significantly with 95 per cent confidence; the means for respondents considering themselves heavily (4) or very heavily (5) burdened do *not* differ significantly[96].

Such outcomes seem to justify the conclusion that our sample results probably *under*estimate the compliance costs of the total population. However, one should bear in mind that this conclusion is based on a sample of only 571 non-respondents, who do not necessarily constitute a random sample of all non-respondents.

In order to roughly estimate the magnitude of the non-response bias, mean costs per firm (fourth column of table 5.8) have been weighted by the estimated relative compliance burden of non-respondents (second column). The weighted mean per firm proves to be Gld 13,700; 10 per cent higher than the Gld 12,400 reported earlier, but well below the upper limit of the 95 per cent confidence interval (14,400). Aggregate compliance costs for the entire business sector would then come to Gld 8.0bn instead of Gld 7.2bn.

From the preceding analysis, it may be concluded that our results are probably biased downwards by non-response, but that the lower and upper limit of the 95 per cent confidence interval may safely be considered as the minimum and maximum value, respectively, at least as far as non-response bias is concerned. Actual compliance costs are likely to be in the upper range of this interval: about Gld 8bn for the total Dutch business sector (except agriculture).

Table 5.9 Compliance costs cross-tabulated with perception of relative compliance burden

	Aggregate compliance costs (quintals)											
Perception of	1 (low)		2		3		4		5 (high)		Total	
compliance burden	n	%	n	%	n	%	n	%	n	%	n	%
1 (low)	42 +	58	12	16	11	15	5 —	7	3 —	4	73	100
2	48 +	31	26	17	38	24	27	17	18 —	12	157	100
3	76 —	16	105	22	100	21	99	21	95	20	475	100
4	29 —	13	42	19	45	20	54	24	56 +	25	226	100
5 (high)	9 —	9	22	22	12 —	12	24	24	33 +	33	100	100
Total	204	20	207	20	206	20	209	20	205	20	1,031	100

Percentages marked + or — differ significantly from other categories (with 95 per cent confidence).
Chi-square: 121 (significance 99.99%)
Kendall's Tau B: .21 (significance 99.99%)
Gamma: .28

[96] Statistical test for difference between two population means: see Neter et al. [1988, pp. 405-406]. The z-scores are 8.6, 5.3, 2.4 and 0.6. The sample size for the lowest cost perception group (1) is 73, less than the required 100 (see section 5.3.1), but a z-score of 8.6 seems to be high enough to justify this.

Reliability and sensitivity analysis

Because no administration is kept of compliance costs as such, the data gathered from respondents are mostly estimates. This means that measurement errors are inevitable. Systematic measurement errors may occur because of non-response bias (see aboye). It has also been argued (e.g. by Tait [1988, p. 353]), that respondents are apt to exaggerate compliance costs, in order to influence government policy. On the other hand, one may argue that the general feeling among respondents is that they are burdened unreasonably heavily by compliance costs, which would make exaggerations unnecessary. The available evidence suggests that businesses are more likely to *under*estimate the level of compliance costs. Sandford and Hasseldine [1992, pp. 61-63] asked their respondents what amount they would claim from the tax authorities as a compensation for compliance costs related to VAT, if such a claim could be made. Overall, the claims were 16 per cent *lower* than recorded costs. Klein-Blenkers et al. [1980, p. 50] found that firms underestimated compliance costs by even 50 per cent on average. This was due mainly to a misunderstanding of the concept of compliance costs: firms are usually not aware of all cost components involved. In order to avoid such bias, compliance costs must be explicitly defined in questionnaires, and, most importantly, compliance costs have to be *itemised*. Thus, all respondents will include similar items in their estimates.

Apart from systematic measurement errors, some respondents may overestimate compliance costs, while others will tend to underestimate them. In practice, such errors tend to cancel out, because of the many components which together constitute compliance costs[97].

In the questionnaire we used, information was solicited on the *amount* of time spent by the owner/manager, spouse and staff on compliance work. In order to arrive at monetary compliance costs, a *value* had to be accorded to the time thus spent. Assumptions about the value of time are discussed in Appendix A1.4. Inevitably, such assumptions are somewhat arbitrary in nature. We therefore have to examine how the results change when alternative measures for the value of time are chosen.

Time spent by the owner/manager has been valued at the reported value, and time spent by the spouse or other members of the family at 50 per cent of this figure. However, we found that owners vary widely in the way they value their own time. The second row of table 5.10 shows that, when time spent by owners/managers (and consequently time spent by spouses) is valued uniformly for all firms, i.e. at the mean reported value of Gld 61 per hour, mean aggregate compliance costs are increased by 1.3 per cent to Gld 12,550.

Time spent by staff was also valued at the reported value, which again varied widely. When staff time is valued uniformly for all firms, at the mean reported value of Gld 40 per hour, mean aggregate compliance costs are decreased by 3.2 per cent to Gld 11,990.

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[97] Sensitivity analysis shows that mean aggregate compliance costs change by less than 1 per cent if costs of different components and programmes are multiplied by random numbers (normally distributed, mean one, standard deviation e.g. 0.2). Thus, the results are quite robust.

Lowering the value of time spent by owners/managers and spouses on compliance work by 10 per cent leads to 3.5 per cent lower mean aggregate compliance costs. A 10 per cent decrease of the value of staff time reduces mean aggregate compliance costs by 2.8 per cent.

We see that, although different assumptions about the value of time, of course, produce different outcomes for compliance costs, outcomes remain well between the upper and lower limit of the 95 per cent confidence interval.

Table 5.10 Mean costs per firm with various assumptions about the value of time

Value of one hour owner/manager	Value of one hour staff time	Mean cost Gld	Change %
As reported	As reported	12,390	-
Mean value (Gld 61)	As reported	12,550	+1.3
As reported	Mean value (Gld 40)	11,990	−3.2
Mean value (Gld 61)	Mean value (Gld 40)	12,150	−1.9
90% of reported value	As reported	11,960	−3.5
As reported	90% of reported value	11,040	−2.8
90% of reported value	90% of reported value	11,600	−6.4

5.3.2 Composition

Compliance costs of particular tax and benefit programmes

Compliance costs of particular tax-benefit programmes are set out in table 5.11. Because these costs were found to vary greatly amongst firms, upper and lower limits are also given[98].

Mean aggregate compliance costs per firm amount to Gld 12,400. Wage withholding tax (PAYE) and social security contributions together are responsible for no less than 43 per cent of these costs (Gld 5,300 per firm). Value added tax is the second most expensive tax to administer: Gld 3,600 per firm, 29 per cent of aggregate compliance costs. Compliance costs of corporation income tax and personal income tax (on business income) amounted to Gld 1,200 and Gld 1,000 respectively. Other taxes, environmental levies[99] and import duties, together with applications for subsidies and supplying information concerning taxation of third parties, together caused 10 per cent of total compliance costs. 15 per cent of all firms reported that they were obliged to spend time and money in order to supply

[98] Based on 95 per cent confidence intervals, see section 5.3.1.

[99] Here, environmental levies include both WABM and other levies, e.g. related to waste, air pollution, noise etc. In the previous chapter, only the administrative costs of WABM were estimated; the other programmes fall outside the scope of this study, because they are too small, or because they are not levied by the central government. Although formally outside the scope of the study, they are, however, included in the business survey, because exclusion would have needed more explanation on the questionnaire than was deemed desirable.

information to tax authorities or social security organisations about third parties, mostly clients and employees.

Table 5.11 Compliance costs of tax-benefit programmes to firms, 1989

	Costs per firm (Gld)				Total costs (Gld million)				
	Mean costs	Lower limit	Upper limit	% of total	Total costs	Lower limit	Upper limit	Revenue (x1,000)	Cost ratio (%)
Payroll taxes	5,300	4,400	6,200	43	3,100	2,500	3,600	107.4 (a)	3
VAT	3,600	2,600	4,600	29	2,100	1,500	2,700	35.5	6
Corporation tax	1,200	600	1,700	9	670	370	970	16.8	4
Personal income tax	1,000	700	1,300	8	580	420	750	4.6 (a)	13
Dividend tax	50	30	80	0	30	20	50	2.0	2
Excise duties	110	50	180	1	70	30	100	9.0	1
Environmental levies	170	90	240	1	100	50	140	1.4 (a)	7
Import duties	370	110	640	3	220	60	370	2.5	9
Property tax	110	80	140	1	60	40	80	2.2 (a)	3
Subsidies	280	140	420	2	160	80	250		
Information supply	270	120	430	2	160	70	250		
Total	12,400	10,200	14,400	100	7,200	6,100	8,400	181.5	4

(a) Estimate of part of tax revenue that is received from firms, based on data from the TCA and CBS. Full details are given in Allers [1990b, pp. 40-41].

The last column of table 5.11 gives compliance costs as a percentage of aggregate tax revenue. Cost ratios range from 1 per cent (excise duties) to 13 per cent (personal income tax). The aggregate cost ratio is 4 per cent. Although the cost ratio is often used to measure compliance costs, it is nevertheless a poor measure of efficiency. An increase in tax rates will usually reduce the cost ratio, because tax revenues increase whereas compliance costs need not change. Obviously, the resulting lower cost ratio has nothing to do with improved efficiency.

Nearly one quarter of mean aggregate compliance costs, Gld 2,900, is the consequence of *changes* in regulations. Not only in the Netherlands, tax laws are infamous for their frequent and complex changes, which cause adjustment costs to be a permanent feature of the tax system. About 45 per cent of adjustment costs were ascribed to changes caused by the so called 'Oort' tax reform, which was actually meant to *simplify* the tax system (see section 4.4.3).

The average firm spent Gld 280 applying for one or more *subsidies*. Obviously, not every firm applied for a subsidy in the period under investigation. Table 5.12 sets out the costs to firms which did. Because the number of respondents for each subsidy is so small, these figures have not been weighted. Moreover, no population totals have been calculated. Cost ratios are computed here as the ratio of compliance costs and the amount of subsidy reportedly applied for.

Of the four subsidy programmes aimed at business included in this study, only three programmes are mentioned by respondents: IPR, INSTIR and PBTS. 'Cost ratios' range from 1.5 to 3.8 per cent. The category 'Other subsidies' includes subsidies to cover expenses of non-profit organisations which are

(partially) financed out of public funds, which may explain the low average cost ratio.

The category of 'Other subsidies' also includes subsidies which are not specified by respondents. The rather casual way in which the subsidy questions on the questionnaire have sometimes been answered, suggests that these answers may be less accurate than the answers to other questions. Especially the allocation of compliance costs to particular subsidy programmes may not be perfect. Sometimes, compliance costs related to several subsidy programmes may have been attributed to one particular programme. Therefore, the figures in table 5.12 are probably less accurate than the overall figure for compliance costs of subsidy programmes (Gld 280 per firm).

Table 5.12 Compliance costs for firms which applied for one or more subsidies (not weighted)

Type of subsidy	Mean costs per firm (Gld 1,000)	Subsidy applied for (Gld 1,000)	Cost ratio (%)	n
IPR	5	290	1.5	12
INSTIR	13	340	3.8	81
PBTS	10	420	2.4	13
Other subsidies	5	1,100	0.5	202
All subsidies (a)	8	960	0.8	273

(a) The total number of respondents (n) is lower than the sum of applicants of different subsidies, because firms may apply for more than one subsidy.

Components of compliance costs

Table 5.13 breaks down compliance costs by component. The most important components are the value of time spent by owners/managers, the value of time spent by staff, and fees paid to outside advisers, such as accountants, each category amounting to almost 30 per cent of total compliance costs. The value of time spent by unpaid spouses/family and 'other costs' each constitute 7 per cent of total costs.

The share of cost components varies considerably between taxes. Compliance costs of payroll taxes largely consist of staff time (43 per cent). VAT on the other hand is relatively often administered by the owner/manager and a spouse or family member, whereas 75 per cent of the compliance costs of corporation income tax are made outside the firm. The compliance costs of personal income tax consist mainly of the value of the owner's time and bills sent by outside advisers. As shown below, most of these differences can be explained by the varying share of the compliance costs of particular taxes in total compliance costs for various economic sectors and firm sizes.

Table 5.13 Breakdown of compliance costs by components (%)

	Owner/ manager	Spouse/ family	Staff	Outside advisers	Other costs	Total
Payroll taxes	19	4	43	24	10	100
VAT	44	17	16	19	3	100
Corporation tax	6	0	15	75	4	100
Personal income tax	40	2	3	44	11	100
Dividend tax	15	0	10	69	7	100
Excise duties	10	1	71	5	13	100
Environmental levies	26	11	43	17	3	100
Import duties	18	7	41	25	10	100
Property tax	44	1	30	20	5	100
Subsidies	31	1	36	33		100
Information	32	2	34	29	3	100
Total	28	7	29	29	7	100

5.4 Compliance costs: subgroups of firms

5.4.1 Compliance costs by number of employees

Aggregate compliance costs

Table 5.14 breaks down aggregate compliance costs by number of employees. Not surprisingly, mean costs per firm increase with number of employees. For small firms, employing less than five persons, mean compliance costs amounted to Gld 9,000 per year, whereas firms employing five hundred or more paid an average Gld 320,000.

Table 5.14 Compliance costs classified by number of employees

Number of employees	Number of firms in sample	Mean costs per firm (Gld 1,000)	Mean costs per empl.(a) (Gld 1,000)	Mean costs per head(b) (Gld 1,000)	Business population (1,000) (c)	Cost total population (Gld m)
0-4	174	9	7.1	4.3	477.0	4,400
5-9	107	15	2.3	2.1	49.2	800
10-19	141	19	1.3	1.3	26.8	500
20-49	220	36	1.1	1.1	18.6	700
50-99	161	56	0.8	0.8	6.2	300
100-499	179	80	0.4	0.4	4.2	300
500+	71	320	0.2	0.2	0.5	200
Total	1,053	12.4	1.8	1.6	582.6	7,200

(a) Mean costs per firm divided by mean number of employees.
(b) Mean costs per firm divided by mean number of employees plus owner/manager.
(c) Total number of firms (source: Kamers van Koophandel [1989]).

The fourth column of table 5.14 demonstrates that costs per employee decrease sharply with the number of employees[100]. For small firms, compliance costs per employee are *thirty* times higher than for big firms. Including the owner/manager in the number of employees, compliance costs per head for small firms are still nearly *twenty* times as high as for big businesses (table 5.14, column 5). Section 5.4.3 (table 5.22) shows that this regressive impact of compliance costs is found *within* each economic sector as well.

By multiplying mean costs in each size category by the number of firms in that category, total costs per size group have been calculated (table 5.14, last column). Over 60 per cent of total compliance costs is borne by firms with less than five employees, which constitute a vast majority of Dutch firms.

How regressive compliance costs really are can be tested statistically by comparing mean compliance costs per employed person (including owner/manager) for different size groups[101]. In order to secure sufficiently large sample sizes (see section 5.3.1) the total sample has been divided into quartiles[102]. Table 5.15 shows that cost differences between quartile means are statistically significant. The regressiveness of compliance costs of payroll taxes and of VAT has been tested in the same way (not shown in the table), and also found to be statistically significant.

Table 5.15 Statistical test of regressiveness of aggregate compliance costs and of decreasing variance of aggregate compliance costs with size

Number of employees (quartiles)	Number of firms in sample	Mean costs per head (a) (Gld 1,000)	Z-score (b)	Variance of costs per head (Gld m)	Z-score (b)
1	154	3.4		26.3	
			3.6		3.3
2	165	1.4		3.1	
			3.8		2.3
3	175	0.8		0.8	
			5.2		5.8
4	180	0.4		0.2	

(a) Mean value of aggregate compliance costs per employee (including owner/manager).
(b) Difference is statistically significant with 95 per cent confidence if $z \geq 2$.

[100] These are the ratios of mean costs and mean number of employees, and not the mean ratios of costs and number of employees. That is, they are the costs per average employee, and not the costs per employee for the average firm. In the last case, costs per employee would have to be calculated for each firm, which is impossible for the 82 firms in the sample without employees.

[101] Statistical test for difference between two population means: see Neter et al. [1988, pp. 405-406].

[102] Because cases with missing values, or cases with no employees or owner/manager, could not be used here, n=674.

Also, the variances of mean costs per employed person within different size groups has been tested. Several researchers have found that this variance was higher for small firms than for large firms (see section 2.2.2). Because of the extreme skewness of the distribution, we cannot employ the usual F-test, which depends heavily on the assumption of normality. Instead, we used a jackknife procedure, which is reliable under quite general conditions[103]. The last two columns of table 5.15 show that the variance of aggregate compliance costs per employed person does indeed decrease significantly with the number of employees.

Distribution of costs over particular programmes

Aggregate compliance costs tend to increase with the number of persons a firm employs. It may be expected, however, that not all taxes are related to the number of employees in the same way. Table 5.16 sets out the distribution of aggregate compliance costs over tax and benefit programmes.

Table 5.16 Distribution of compliance costs over tax-benefit programmes, classified by number of employees (%)

	Number of employees							
	0-4	5-9	10-19	20-49	50-99	100-500	500+	Total
Payroll taxes	33	51	59	55	60	65	62	43
VAT	38	18	18	14	12	10	9	29
Corporation tax	8	11	13	12	13	11	11	9
Personal income tax	11	8	2	0	0	0	0	8
Dividend tax	0	1	1	1	0	0	0	0
Excise duties	0	3	0	3	3	1	2	1
Environmental levies	1	1	1	1	2	1	2	1
Import duties	2	4	1	5	3	4	9	3
Property tax	1	0	1	1	1	1	2	1
Subsidies	2	2	2	5	4	4	4	2
Information	3	1	1	2	1	2	0	3
Total	100	100	100	100	100	100	100	100

Not surprisingly, the share of payroll taxes (wage withholding tax and social security contributions) in total compliance costs increases considerably with the number of employees, from 33 per cent for firms with less than five employees to 62 per cent for firms with five hundred or more employees. Consequently, the share of most other taxes drops when the number of employees goes up, the only exception being corporation income tax. Its share increases from the smallest size group to the next, because most of the smallest enterprises are subject to personal income tax instead. The share of personal income tax correspondingly decreases. Taken together, the share of the two profit taxes drops with the number of employees. The share of value added tax falls from 38 per cent for small business to 9 per cent for large companies.

[103] Neter et al. [1988, pp. 511-512].

Distribution of costs over components

Table 5.17 shows the relative importance of the five components which together constitute total compliance costs. As would be expected, both the share of time spent by the owner/manager and by the spouse decrease steadily with the number of employees, whereas the share of staff time more than quadruples. The cost share of outside advisers, accountants, etc., shows a decreasing trend, contrary to the share of 'other costs'.

Table 5.17 Distribution of compliance costs over components, classified by number of employees (%)

	Number of employees							
Nature of costs	0-4	5-9	10-19	20-49	50-99	100-500	500+	Total
Time proprietor	37	25	16	9	3	1	0	28
Time spouse	11	4	1	1	0	0	0	7
Time staff	16	31	45	50	64	64	74	29
Fees to advisers	30	34	33	29	23	24	14	29
Other costs	6	6	5	12	9	11	13	7
Total	100	100	100	100	100	100	100	100

5.4.2 Compliance costs by turnover

Aggregate compliance costs

Using the number of employees as a measure of firm size, it was found that mean compliance costs per firm increase with size, whereas mean costs per employee fall. Table 5.18 shows that similar results are obtained if business turnover is used as a measure of firm size. Mean compliance costs range from Gld 4,000 for firms with annual turnover below Gld 0.5m, to Gld 94,000 for firms with a turnover of more than Gld 500m.

Again, the burden of compliance falls disproportionately on the small firm. For the smallest firms, costs per employee are twenty times as high as those for the largest firms; costs per head (counting the owner/manager as well as employees) are ten times as high. As a percentage of turnover, aggregate compliance costs fall from almost 2 per cent for small firms to only 0.006 per cent for very large firms.

Table 5.18 Compliance costs classified by turnover (a)

Turnover (Gld m)	Number of firms in sample	Mean costs per firm (Gld 1,000)	Mean costs per employee (b) (Gld 1,000)	Mean cost per head (c) (Gld 1,000)	Mean costs as percentage of turnover (d)
0-½	145	4	5.1	2.5	1.7
½-1	92	14	4.7	3.6	1.9
1-2	109	19	3.9	3.3	1.3
2-5	171	24	2.0	1.9	0.7
5-10	128	22	1.0	1.0	0.3
10-50	220	35	0.8	0.8	0.1
50-100	55	57	0.5	0.5	0.08
100-500	75	59	0.5	0.5	0.02
500+	36	94	0.3	0.3	0.006

(a) Because 22 respondents failed to indicate their turnover range, this table is based on 1,031 respondents instead of 1,053. In order to avoid confusion, no totals are given here, as they differ slightly from those in tables based on 1,053 respondents.
(b) Mean costs per firm divided by mean number of employees.
(c) Mean costs per firm divided by mean number of employees plus owner/manager.
(d) Average turnover within each size group is assumed to be the mid-point of the category, except for the highest category, where available information allowed to calculate the exact average.

Distribution of costs over particular programmes

Table 5.19 shows that the distribution of compliance costs over tax and benefit programmes classified by turnover is quite similar to the distribution when firms are classified by number of employees, except that the relationship becomes slightly more volatile. Apart from the fact that the number of size groups based on turnover is larger than that based on the number of employees, this result might be explained by the fact that compliance costs of payroll taxes, which are related more

Table 5.19 Distribution of compliance costs over tax-benefit programmes, classified by turnover(a)(%)

	Turnover (Gld m)								
	0-0.5	0.5-1	1-2	2-5	5-10	10-50	50-100	100-500	500+
Payroll taxes	30	37	39	54	60	52	51	54	54
VAT	37	38	38	24	14	14	8	13	11
Corporation tax	4	8	3	8	14	14	10	19	12
Personal income	19	11	8	5	1	0	0	0	0
Dividend tax	0	0	0	1	1	0	0	0	0
Excise duties	0	0	0	0	0	4	11	3	2
Environm. levies	1	1	2	1	1	2	1	1	2
Import duties	0	0	7	1	2	7	11	5	13
Property tax	1	1	1	1	1	1	1	2	2
Subsidies	1	3	1	3	6	3	2	2	2
Information	5	0	2	2	0	4	3	2	3
Total	100	100	100	100	100	100	100	100	100

(a) Because 22 respondents failed to indicate their turnover range, this table is based on 1,031 respondents instead of 1,053. In order to avoid confusion, no totals for all firms are given here, as they differ slightly from those in tables based on 1,053 respondents.

directly to number of employees than to turnover, constitute 43 per cent of aggregate compliance costs.

Again, the shares of payroll taxes and corporation income tax increase considerably with firm size, whereas the cost shares of value added tax and personal income tax fall.

Distribution of costs over components

As was to be expected, the shares of time spent on compliance work by the owner/manager and spouse fall with increasing turnover (table 5.20), and the share of staff time increases. The two other cost components show no clear trend.

Table 5.20 Distribution of compliance costs over components, classified by turnover (a) (%)

	Turnover (Gld m)								
Nature of costs	0-0.5	0.5-1	1-2	2-5	5-10	10-50	50-100	100-500	500+
Time proprietor	49	46	30	14	8	6	0	0	0
Time spouse	8	2	18	12	0	0	0	0	0
Time staff	8	19	18	35	55	59	62	54	67
Fees to advisers	28	29	26	33	28	26	24	35	18
Other costs	7	4	8	6	9	9	14	11	15
Total	100	100	100	100	100	100	100	100	100

(a) Because 22 respondents failed to indicate their turnover range, this table is based on 1,031 respondents instead of 1,053. In order to avoid confusion, no totals for all firms are given here, as they differ slightly from those in tables based on 1,053 respondents.

5.4.3 Compliance costs by economic sector

Aggregate compliance costs

Table 5.21 presents aggregate compliance costs for various sectors of economic activity. Mean costs per firm differ considerably between sectors; they vary from Gld 6,000 (hotels and catering) to Gld 20,000 (manufacturing and mining). A suitable measure for the compliance burden for firms in different sectors is mean costs per employee or per head[104].

Roughly speaking, two groups may be discerned: economic sectors with relatively low mean costs per employee (Gld 900-1,400) and a relatively high cost group (Gld 2,300-3,300). 'Low compliance cost' sectors include manufacturing and mining, construction and installation, transport and communication and non-commercial services. 'High compliance cost' sectors include trade, hotels and catering, repair shops, and banks, insurances and commercial services. However, both groups do not only differ in mean compliance costs per employee, but also in size: 'low compliance cost' sectors have an average of 8-22 employees per firm, as against 2-4 employees in 'high compliance cost' sectors.

[104] Costs per head are costs per employee including owner/manager.

Table 5.21 Compliance costs classified by economic sector

Economic sector	Number of firms in sample	Mean costs per firm (Gld 1,000)	Mean costs per empl.(a) (Gld 1,000)	Mean costs per head (b) (Gld 1,000)	Business population (1,000) (c)	Cost total population (Gld m)
Manufacturing/mining	152	20	0.9	0.9	46	900
Construction/installation	170	13	1.4	1.3	40	500
Trade	165	14	3.3	2.7	188	2,500
Hotels/catering	87	6	2.7	1.8	40	200
Repair shops	47	9	2.3	1.8	14	100
Transport/communication	95	12	1.4	1.3	25	300
Bank/insurance/com.services	111	10	2.3	2.0	160	1,500
Other services	226	15	1.3	1.2	71	1,000
Total	1,053	12.4	1.8	1.6	583	7,200

(a) Mean costs divided by mean number of employees.
(b) Mean costs divided by mean number of employees plus owner/manager.
(c) Total number of firms (source: Kamers van Koophandel [1989]).

Table 5.22 Mean aggregate compliance costs divided by mean number of employees (Gld 1,000; number of respondents in parentheses)

Number of employees	Economic sector (a) 1	2	3	4	5	6	7	8	Total
0-9	4.7	2.7	6.2	3.8	3.7	4.4	5.5	7.3	5.5
	(19)	(43)	(46)	(34)	(28)	(25)	(30)	(56)	(281)
10-99	0.9	1.2	1.4	1.4	0.9	1.1	1.1	0.5	1.1
	(74)	(84)	(88)	(39)	(19)	(43)	(59)	(116)	(522)
100+	0.4	0.5	0.4	0.4		0.4	0.2	0.2	0.3
	(59)	(43)	(31)	(14)	(-)	(27)	(22)	(54)	(250)
Total	0.9	1.4	3.3	2.7	2.3	1.4	2.3	1.3	1.8
	(152)	(170)	(165)	(87)	(47)	(95)	(111)	(226)	(1,053)

(a) Classification of economic sectors:
1 Manufacturing, mining
2 Construction, installation
3 Trade
4 Hotels, catering
5 Repair shops
6 Transport, communication
7 Banks, insurance, commercial services
8 Other services

Table 5.22 shows mean costs per employee in different sectors for three size groups. In each sector, mean costs per employee decrease with firm size. However, only in one sector do mean costs per employee differ systematically from the all-sector average *in each size group*. The 'low compliance costs sectors' show low costs per employee in some size groups and high costs in others. Non-commercial services were classified as low cost, but in the smallest size group (less than 10 employees) mean costs per employee are Gld 7,300, which exceeds the

cost level in any other sector. Only in the trade sector are mean compliance costs per employee systematically above the average in each size group. In other 'high costs sectors' (relatively high) costs per employee are related more strongly to (low) number of employees.

The last column of table 5.21 shows that more than one-third of aggregate compliance costs was borne by the trade sector. Mean compliance costs were relatively high in this sector, and a large proportion of the business population belongs to this group.

Distribution of costs over particular programmes

Table 5.23 sets out the distribution of aggregate compliance costs by eight economic sectors. Three sectors stand out from the rest: trade, hotels and catering, and repair shops. Firms in these groups are characterised by relatively few employees and relatively small mean transaction size; a large proportion of these firms is headed by an owner/manager. This is reflected in a relatively low share of the compliance costs of payroll taxes and corporation income tax, and a high share of the costs of value added tax and personal income tax.

Table 5.23 Distribution of compliance costs over tax-benefit programmes, classified by economic sector (%)

	Economic sector (a)								
	1	2	3	4	5	6	7	8	Total
Payroll taxes	53	60	30	36	33	52	41	58	43
VAT	16	19	42	32	45	26	23	20	29
Corporation tax	9	10	5	4	2	8	20	5	9
Personal income	4	6	11	16	14	7	6	8	8
Dividend tax	0	0	0	0	0	1	1	0	0
Excise duties	1	0	2	0	0	2	0	0	1
Environmental levies	1	1	2	3	4	1	1	1	1
Import duties	4	0	6	0	0	2	2	0	3
Property tax	1	1	1	3	1	1	1	1	1
Subsidies	9	1	1	3	0	1	1	3	2
Information	1	1	1	1	1	0	5	3	2
Total	100	100	100	100	100	100	100	100	100

(a) Classification of economic sectors: see footnote table 5.22.

Compliance costs of import duties are relatively high for firms in the sectors manufacturing and mining, and trade. The share of compliance costs to obtain subsidies is relatively high for manufacturing and mining firms. The obligation to supply information to tax authorities or social security organisations causes comparatively high costs for sector 7 (banks, insurance companies, commercial

services). This may be attributed to the obligation for banks (since 1988) to inform the tax authorities about interest paid to clients[105].

Distribution of costs over components
Finally, table 5.24 gives a breakdown by type of cost. Time spent by owners/managers makes out a remarkably large proportion of total compliance costs of traders: 41 per cent. In line with the conclusions of the previous section, staff time is a relatively unimportant component of total compliance costs for firms in the trade, hotels/catering and repair sectors. The share of time spent by spouses or other family members is strikingly high for repair shops: 25 per cent. Hotels and catering businesses contract out 50 per cent of their compliance activities.

Table 5.24 Distribution of compliance costs over components, classified by economic sector (%)

	Economic sector (a)								
Nature of costs	1	2	3	4	5	6	7	8	Total
Time proprietor	20	18	41	30	24	35	18	18	28
Time spouse	3	5	6	4	25	3	17	1	7
Time staff	43	42	16	10	17	34	23	53	29
Fees to advisers	26	27	30	50	30	22	35	20	29
Other costs	9	7	7	5	3	6	6	7	7
Total	100	100	100	100	100	100	100	100	100

(a) Classification of economic sectors: see footnote table 5.26.

5.5 Compliance costs, total administration costs and labour costs

5.5.1 Administration costs

Tables 5.25 and 5.26 show the extent to which the entire administration of firms is occupied with compliance activities. For all firms, compliance costs make up 10 per cent of total administration costs. This proportion falls steadily from 21 per cent for the smallest firms to only 2 per cent for the largest firms. The hotel and catering business devotes the highest proportion of their administrative work to compliance activities: 29 per cent. In this sector, total administration costs are relatively low (only 17 per cent of the all-firm mean).

Of the time owners and managers spend on administration, almost one-quarter (24 per cent) is spent on compliance work. Spouses and staff devote 12 and 5 per cent of their administrative work on compliance activities, respectively. No clear trend is apparent with respect to firm size. Spouses and other family members, doing administrative work for repair shops, spend nearly one-third of

[105] This is called *renterenseignering*. Until tax year 1993, it applied only to interest paid to natural persons, not organisations (firms, etc.). As a result of the introduction of *renterenseignering*, an extra Gld 500m was collected in 1988 alone [TCA, 1990 issue, p. 24].

their time on compliance activities. Table 4.10 already demonstrated that 25 per cent of total compliance costs in this sector consists of time spent by spouses and family members.

Nearly one-fifth (19 per cent) of amounts paid to outside administrators, advisers, etc. consists of compliance costs. Interestingly, the compliance cost component of the costs of outside advisers decreases considerably with firm size, from 29 per cent to only 3 per cent.

Of the 'other costs' of the administration, only 2 per cent is ascribed to compliance costs. This raises the suspicion that 'other costs' caused by compliance activities are not fully appreciated by all respondents. On the other hand, such costs often have a fixed character, which means they possibly would still be incurred in the absence of compliance activities.

Table 5.25 Compliance costs as percentage of total administration costs, by size class

Component of administration costs	Number of employees 0-4	5-9	10-19	20-49	50-99	100-500	500+	Total
Owner/manager	26	15	18	15	23	29	0	24
Spouse/family	13	5	12	8	14	0	0	12
Staff	8	5	6	5	6	4	2	5
Outside advisers	29	23	12	13	9	8	3	19
Other costs	9	2	1	2	1	1	1	2
Total compl. costs	21	11	7	6	6	3	2	10

Table 5.26 Compliance costs as percentage of total administration costs, by economic sector

Component of administration costs	Economic sector (a) 1	2	3	4	5	6	7	8	Total
Owner/manager	26	14	28	22	12	28	20	21	24
Spouse/family	9	9	7	6	32	7	25	8	12
Staff	8	12	6	13	8	6	2	7	5
Outside advisers	12	17	31	38	39	14	14	18	19
Other costs	2	5	3	15	3	4	1	4	2
Total compl. costs	9	15	16	29	16	11	6	11	10

(a) Classification of economic sectors:
1 Manufacturing, mining
2 Construction, installation
3 Trade
4 Hotels, catering
5 Repair shops
6 Transport, communication
7 Banks, insurance, commercial services
8 Other services

5.5.2 Labour costs

Table 5.27 shows that for small firms, compliance costs amount to 10 per cent of labour costs. Labour costs rise with firm size more rapidly than do compliance costs. Of course this was to be expected, labour costs being closely related to number of employees, and compliance costs per employee being negatively correlated with number of employees. Total compliance costs come to 3 per cent of aggregate labour costs.

Table 5.27 Compliance costs as percentage of total labour costs, by size class

Number of employees	0-4	5-9	10-19	20-49	50-99	100-500	500+	Total
Cost as % of labour costs	10	4	3	2	1	1	0	3

5.6 Incidence of compliance costs

Only part of the burden of compliance costs incurred is actually borne by firms. In the first place, collecting taxes and social security contributions from third parties (clients and employees) may produce cash flow benefits. Second, compliance costs are at least partially deductible from taxable profits.

5.6.1 Cash flow benefits

The issue of cash flow benefits is discussed at length in Sandford et al. [1989, pp. 39-47] and was already mentioned in section 2.2.4. Cash flow benefits arise when tax is collected from third parties and where some time lies between the moments of collection and payment to the tax authorities. Of course, in cases where payment is due before collection, cash flow 'benefits' will be negative. The *size* of this interest-free loan depends on the period of time between collection and payment and the amount of tax collected; its *value* depends on the relevant rate of interest. Full details on the method by which cash flow benefits have been estimated are in appendix A2.

The value of the cash flow benefit from VAT is estimated at Gld 360m, or Gld 600 per firm. This means that approximately 17 per cent of the compliance costs of VAT is borne by the public treasury.

Due to lack of data, only a maximum value of the cash flow benefit from all excise duties can be calculated. It is impossible to say how much the actual value differs from this maximum, which amounts to Gld 60m. That is approximately 50 per cent of the compliance costs of excise duties.

Collection of PAYE and social security contributions earned the business sector an estimated cash flow benefit worth Gld 250m, 8 per cent of compliance costs.

Thus, the total value of cash flow benefits may roughly amount to at least Gld 600m annually, or 8 per cent of aggregate compliance costs.

Cash flow benefits are distributed unevenly over firms. Large firms benefit most. Some firms actually make a profit from collecting taxes, as cash flow benefits exceed their compliance costs. Although cash flow benefits seem to reduce the burden of compliance costs for businesses (but not for society), they do reinforce the regressive impact of such costs.

5.6.2 Tax deduction

Part of the compliance costs of firms is borne by the public treasury because costs eat into tax revenue. Higher costs to operate a business usually result in lower profits and therefore lower tax payments. At least that is the case with monetary compliance costs. The case of time costs is less clear. Where time spent by the owner or spouse on compliance work would otherwise have been devoted to other business matters, compliance work can be assumed to have a detrimental effect on taxable profits. That may not be the case if time spent on compliance work would otherwise have been spent in leisure.

A conservative estimate of tax savings due to compliance costs would be based on money costs only. Money costs (staff, outside advisers, accountants, etc. and 'other costs') make up 65 per cent of total compliance costs (see table 5.13): Gld 4.7bn. After deduction of Gld 0.6bn - the estimated value of the cash flow benefit - we arrive at a reduction of taxable profits by Gld 4.1bn. Assuming an average tax rate of 40 per cent on all taxable profit (section 2.2.4), the resulting tax saving, due to compliance costs, is an estimated Gld 1.6bn. Obviously, this rough estimate is no more than an indicator of magnitude.

5.6.3 Distribution of the compliance burden

In conclusion, it seems that an estimated 30 per cent of aggregate compliance costs of tax-benefit programmes to businesses, Gld 2.2bn, is borne by the public treasury: interest-free loans to tax collecting agents are worth Gld 0.6bn, and profit taxes are reduced by 1.6bn. As a result, the net compliance burden on business is about Gld 5bn.

5.7 International comparisons

Several factors complicate international comparisons of compliance costs. Perhaps the most important problem is lack of data. For most countries, virtually no data are available. For others, data may be available for a limited number of programmes, industries, size classes, years or regions. But even in cases where sufficient data are available, tax-benefit systems of different countries will generally be hard to compare. Even if particular taxes are more or less similar in different countries (e.g. VAT in member countries of the European Union), cost ratios may not simply be compared, because of different tax rates, and variations in the

occurrence of fraud. Average costs per firm are highly influenced by average firm size, which may differ considerably between countries. Moreover, compliance costs are expressed as costs per firm or per employee by some researchers, while others may give aggregate costs per programme, or costs as a percentage of revenue, turnover, or GDP. Finally, different cost components may be included in different studies, and time may be valued in various ways.

In order to place the results of our study in an international context, we summarise the outcomes of several studies published since 1980 (table 5.29). Amounts in foreign currency have been converted into guilders of the same year, using exchange rates.

For the Netherlands, the only comparable data are contained in the results of Snijder [1981], based on a survey of 366 small and medium-sized firms. Interestingly, Snijder used accountants who interviewed their own clients, a method which may be expected to yield reliable results. Average compliance costs of payroll taxes amounted to Gld 490 per employee. VAT cost the average firm Gld 4,000; the costs of personal income tax and corporation income tax together were estimated roughly at Gld 350-1,000. Because of the ten-year-gap between Snijder's study and the present study, and because Snijder's study was limited to small and medium-sized firms, no direct comparison can be made.

Hunkeler [1985][106] studied the compliance costs related to Swiss federal government regulations in 1983. A postal survey of manufacturers with under two hundred employees yielded a response of 231 (34 per cent). Compliance costs were found to be very regressive, while the cost level varied most for small firms. Labour-related regulations (mainly payroll taxes) cost on average SFr 9,100 (Gld 12,800) per annum; tax-related costs amounted to SFr 9,900 (Gld 13,900). Total compliance costs of government regulations in Switzerland were calculated at SFr 23,400 (Gld 32,900) for the average firm. Compliance costs of particular taxes or cost ratios have not been computed, thus comparison with other countries is difficult.

The most important trade partner of the Netherlands is the Federal Republic of Germany (West Germany at the time). Here, Tiebel [1986] studied the compliance costs of taxation to business in 1984. His results are based on a survey in a magazine *(Impulse)*; responses came from 444 mainly small firms. Costs of legislative changes and overhead costs are excluded. Contrary to our result, VAT turned out to be the most expensive tax to comply with, which confirms an earlier finding of Täuber [1984]. Total compliance costs per employee amounted to DM 1,910 (Gld 2,150); our study arrives at Gld 1,825. Unfortunately, total costs of particular taxes are not given, nor are cost ratios. Aggregate compliance costs for W-Germany amounted to an estimated DM 37bn (Gld 42bn), or 2.1 per cent of GDP. Our study estimates total costs to be 1.5 per cent of (Dutch) GDP. Thus, the compliance cost level in the Netherlands seems to compare favourably with cost levels in Germany. However, methodologically, Tiebel's study is not very strong. Only a very small proportion of subscribers to the magazine which printed the questionnaire responded. A possible non-response bias has not been studied.

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[106] For a summary, see Hunkeler and Walser [1986].

Most research on compliance costs has been conducted in the English-speaking world. The most thorough and comprehensive research in the field has been done at the university of Bath, UK, by the research team of Sandford. Sandford et al. [1989] give the first scientific estimate of the operating costs of a complete tax system (for 1986/87), based mainly on several large-scale surveys. Table 5.28 compares the results of the Dutch and UK studies. Aggregate compliance costs to UK business are estimated at around £2bn (Gld 6,6bn). This amounts to 0.6 per cent of GDP, against an estimated 1.5 per cent in the Netherlands. As a percentage of tax revenue, compliance costs in the Netherlands exceed those in the UK for all taxes considered. Like in the Netherlands, compliance costs in the UK are regressive in nature; the burden falls with disproportionate severity on the small firm.

Table 5.28 Compliance costs of firms, UK and the Netherlands

	UK (1986/87)			The Netherlands (1989)	
	£ m	Gld m	Cost ratio	Gld m	Cost ratio
PIT, Payroll taxes	770	2,500	1%	3,100	3%
VAT	790	2,600	3.7%	2,100	6%
Corporation tax	300	1,000	2.2%	670	4%
Excise duties	33	100	0.2%	30	1%

Source: Sandford et al. [1989].

Bannock and Albach [1989] report the results of an interesting attempt to compare compliance costs of VAT for small firms in Britain and West Germany. Based on postal surveys in 1987, the compliance costs of VAT in both countries were estimated for 1986. The German sample was drawn from the membership list of the Association of Young Entrepreneurs. From all 2,500 members, 800 were randomly selected, which were located in two German states; 197 responded (25 per cent). The British sample of 600 was randomly selected from readers of a particular business magazine, who had indicated a willingness to participate in surveys. A total of 262 usable responses was received (44 per cent). The British sample contains relatively more small firms than the German sample. Results have not been weighted, though. Leaving out firms employing ten or more, costs for the average firm amounted to £674 in Britain (n=60) and £512 in Germany (n=24); overhead costs are excluded. Exchange rates based on purchasing power parity have been used, which value sterling some 15 per cent higher than market exchange rates, thus increasing the gap. Compliance costs amounted to £3 per £1,000 of turnover on average in the UK, against less than 50p in Germany. Because of the differences between both samples, doubtful representativeness and relatively small sample sizes, it would seem that no firm conclusions can be drawn from this study.

Leonard [1986] estimated the compliance costs of payroll taxes in Ireland in 1983. Based on a survey of 119 members of an employers' organisation, average costs per firm were estimated at £1,425 (Gld 5,000; the Netherlands: Gld 5,300).

Total compliance costs amounted to £132m (Gld 460m), which equals 5.7 per cent of revenue (the Netherlands: 3 per cent).

Compliance costs of payroll taxes have also been studied by Vaillancourt [1989] in Canada. Based on a survey of 385 employers (response 10 per cent), compliance costs in 1986 were estimated at $32,000 (Gld 51,000) per firm. Total compliance costs amounted to $2,750m (Gld 4,400m). That is 3.5 per cent of revenue, about the same percentage as was found for the Netherlands (3 per cent).

Cléroux estimated the compliance costs of the Canadian Goods and Services Tax, which came into effect in January 1991. A total of 10,123 members of the Canadian Federation of Independent Business responded to a postal questionnaire in September 1992 (response rate 15 per cent). Total gross compliance costs are estimated at $4.8bn for the period from September 1991 to September 1992. Cash flow benefits amount to 4 per cent of compliance costs only. The cost ratio is very high: no less than 26 per cent. Apart from the fact that the period under study started less than a year after introduction of the tax, which suggests that estimated costs include some temporary introduction costs, the high cost ratio is probably also partly the result of the low tax rate (7 per cent), which keeps revenues at a relatively low level.

Peat Marwick Mitchell [1982] estimated the compliance costs of sales and use taxes in the United States. Based on a survey of 80 members of business organisations (response rate 30 per cent) and on-site studies at 18 businesses, the cost ratio is estimated between 2.0 and 3.7 per cent (VAT in the Netherlands: 6 per cent). Small firms were found to be relatively heavily burdened.

Sandford and Hasseldine [1992] estimated the compliance costs of business taxes in New Zealand in 1990/91, using two large-scale postal surveys of mainly small and medium-sized firms. Compliance costs of payroll taxes are estimated at $195m (Gld 210m), 1.9 per cent of revenue (based on 1887 respondents, response rate 40 per cent), which is clearly below the Dutch estimate of 3 per cent. Compliance costs of VAT and business income tax amount to $453m (Gld 490m; 7.3 per cent of revenue) and $1,226m (Gld 1,330m; 19.6 per cent of revenue), respectively (based on 2,954 respondents, response rate 31 per cent). The administration of both taxes is relatively expensive compared with their Dutch counterparts. Together with fringe benefit tax ($8.5m or Gld 9.2m, 1.7 per cent of revenue), total business compliance costs amount to $1,882m (Gld 2,040), 2.5 per cent of GDP (Netherlands: 1.5 per cent).

Finally, for Australia, estimates are available of the compliance costs of corporation income tax, wholesale sales tax and payroll taxes. Pope et al. [1991] used a postal survey of 314 companies (response rate 17 per cent) to estimate compliance costs related to income taxation in 1986/87. These amounted to $646-1,341m (Gld 990-2,060m), 11.4-23.7 per cent of revenue (3-6 times the Dutch estimate). Compliance costs of the wholesale sales tax in 1990/91 have been estimated by Pope et al. [1993a] at $179m (Gld 260m), 1.9 per cent of revenue. This figure is based on a postal survey of 593 businesses, a response rate of 24 per cent. A similar tax does not exist in the Netherlands, but the cost ratio is below that of the Dutch VAT, which is not restricted to wholesalers. Finally, Pope et al. [1993b] estimated the compliance costs of PAYE and Payroll Tax combined in

1989/90 at 1.7 per cent of revenue, which is below the cost level we found for payroll taxes in the Netherlands (postal survey of 745 firms, response rate 27 per cent). Leaving out Payroll Tax, which is levied at the State/Territory Government level, the cost ratio comes to 1.4 per cent.

Table 5.29 International comparison of business compliance cost ratios

Country	Taxes	Year	Cost ratio (%)	Cost ratio the Netherlands (%, 1989)
W-Germany	Business taxation	1984	2.1 (a)	> 1.5 (a)
United Kingdom	PIT, payroll	1986/87	1	< 3
	VAT	1986/87	3.7	< 6
	Corporation income tax	1986/87	2.2	< 4
	Excise duties	1986/87	0.2	< 1
Ireland	Payroll taxes	1983	5.7	> 3
Canada	Payroll taxes	1986	3.5	> 3
	Goods and Services Tax	1991/92	26	> 6
United States	Sales and use tax	1982	2.0-3.7	< 6 (b)
New Zealand	Payroll taxes	1990/91	1.9	< 3
	VAT	1990/91	7.3	> 6
	Business income tax	1989/90	19.6	> 4 (c), 13 (d)
Australia	Corporation income tax	1986/87	11.4-23.7	> 4
	Wholesale sales tax	1990/91	1.9	< 6 (b)
	Payroll taxes	1989/90	1.7	< 3

(a) Overall compliance costs as a percentage of GDP.
(b) VAT.
(c) Corporation income tax.
(d) Personal income tax (on business income).
Sources: see text.

Table 5.29 suggests that the level of business compliance costs in the Netherlands is not very different from the cost level in other countries. In the UK, cost ratios seem to be distinctly lower. The same is true of payroll taxes in Australia and New Zealand. On the other hand, costs related to business income taxation are lower in the Netherlands than in Australia or New Zealand, and Dutch payroll taxes cost less than those in Ireland or Canada. However, the reader is advised to keep in mind the caveats related to international comparisons, which were mentioned earlier in this section. Apart from the level of compliance costs, the cost ratio depends on level of tax revenue. Thus, the actual compliance burdens to individual firms do not follow from the data in table 5.29.

5.8 Summary and conclusions

The data on which this chapter is based were collected in 1990 through a mail survey of 1,053 enterprises (including non-profit organisations) in all size classes and all economic sectors, except agriculture. The questions related to 1989, or the most recent financial year for which data were available. The net response rate was

20 per cent, or 0.18 per cent of the universe. The raw data have been weighted by economic sector and by number of employees.

In 1989, mean aggregate compliance costs per firm amounted to between Gld 12,200 and Gld 14,400. For all firms, costs were between Gld 6.1bn and Gld 8.4bn. This is 3 per cent of the wage sum, 1.5 per cent of GDP or 4 per cent of tax revenue collected from firms. Because the survey response was probably somewhat biased towards firms with low compliance costs, actual compliance costs are likely to be in the upper range of the confidence interval. Approximately 30 per cent of aggregate compliance costs is borne by the public treasury, through interest-free loans to tax collecting agents and lower tax revenue from profit taxes.

Payroll taxes and value added tax are the most expensive taxes to comply with. They cause 43 and 29 per cent of total compliance costs, respectively. The most important cost components, time spent by owner/manager, staff time and fees to external accountants, advisers, etc., each make up about 30 per cent of total compliance costs.

The burden of compliance is not distributed evenly over firms. Compliance costs on average make up 10 per cent of the administration costs of firms. However, this proportion falls steadily from 21 per cent for the smallest firms to only 2 per cent for large firms. Compliance costs per employee decrease sharply with firm size. Differences between economic sectors must for a large part be attributed to differences in average firm size. Only trading companies consistently show relatively high compliance costs in different size classes. This sector incurs one-third of total compliance costs. The hypothesis that the variance of mean compliance costs per employee decreases with firm size has been confirmed. International comparisons, although rather imperfect, do not suggest that, in the Netherlands, the level of compliance costs differs very much from cost levels in comparable industrialised countries.

6

Compliance costs to private households

Private households incur compliance costs as well as firms. After discussing the survey used to gather the necessary data, we deal with the various tax-benefit programmes in succession. We then estimate total compliance costs to households. We conclude by comparing our results to those of earlier Dutch and foreign research.

6.1 Methodology

This section discusses the survey that was used to gather data on the compliance costs to private households. The survey was carried out by a commercial polling institute *(NSS Marktonderzoek BV)* on behalf of the Social and Cultural Planning Bureau (SCP) of the Netherlands. Once every four years the SCP, a government agency, surveys the use that households make of a host of social and cultural programmes (AVO: *Aanvullend voorzieningengebruik onderzoek*). The SCP kindly agreed to include a number of questions on compliance costs in the AVO 1991 survey. Through this, considerable economies of scale have been achieved, in particular, due to the fact that the original SCP questionnaire already contained a large number of socio-demographic variables. The methodology of the AVO-survey is described in SCP [1992]. Here, we focus on the compliance cost part of that survey.

6.1.1 Sampling design

The sample includes households from all over the country, including single-person households. The sample frame was drawn from the database of the Post Office, which contains all household addresses. First, a random sample of 10,059 addresses was drawn. Then, supplementary samples were drawn from five big cities, because a lower response rate was expected there. The resulting sample frame consists of 13,129 addresses.

6.1.2 Questionnaire

The questionnaire used consists of three parts: one list of questions for the household as such, one list for adult household members (aged 16 or more), and one for children. A pilot survey was undertaken in order to test the questions. The complete questionnaire is reprinted in SCP [1992]. Here, we discuss the questions

related to compliance costs[107]. Three cost components are distinguished: time spent by respondents, time spent by others (spouse, friends; unpaid), and money costs.

The household questionnaire contains several questions about compliance costs of the rent subsidy programme: whether rent subsidy is being received, and, if so, the amount of subsidy, and the amount of time and money involved in claiming the subsidy.

Adult household members are asked whether they receive any of a list of social insurance and welfare benefits, and, if they do, which type of benefit is received, since how long and to what amount. Those who received benefits under different programmes were asked to pick the most important one. Respondents are subsequently asked to estimate the amount of time and money spent in connection with this benefit during the last six months. Several activities which may generate compliance costs are mentioned explicitly: applying for benefit, informing the benefit administration of changes in previously supplied information, reading leaflets, etc.

Then respondents are asked if during the past six months they have applied for some benefit in vain. Sometimes, it is not immediately obvious if someone will qualify for a benefit. Not all applications are granted. Time and money lost in vainly claiming benefits should, of course, be counted as compliance costs too.

The next block of questions concern Personal Income Tax (PIT). Those who had filed an income tax return are asked which form applied to them, and how much time and money they had spent on the 1990 income tax return (which would normally have been filed in the first half of 1991).

After having filed a return, audits and tax appeals can generate additional compliance costs. It is not always easy to attribute such costs to any specific tax year; tax procedures can be spread out over a lengthy period. Respondents are asked about time and money *spent in the year 1990.*

Some final questions refer to time and money spent on wealth tax in 1990.

6.1.3 Survey

The survey was carried out in September-December 1991, between the summer holidays and Christmas. First, a letter of introduction from the Director of the SCP was sent to each household in the sample. The letter explained the aim of the survey and announced the visit of a pollster. Then the first visit took place, at which the pollster took down information concerning the household from the head of the household or his/her partner. If neither was at home, the household was revisited once or twice.

For each household member, a questionnaire was left behind. On the second visit, after two weeks, the questionnaires were collected after being checked for completeness, and after possible problems with completion had been solved. Participating households were rewarded with a pen set.

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[107] These questions are reprinted in Allers [1992b, appendix 4].

Especially in the big cities, it was found increasingly difficult to find people at home. Therefore, it was decided that individuals not found at home after three tries would be contacted by telephone. The questionnaires were then sent by post. In this way, the response increased by about 350 individuals.

6.1.4 Response

The response rate was 44 per cent of all approached households, which is rather satisfactory for this kind of survey. In the cities, the response rate was relatively low, as had been anticipated. In total, 10,992 persons aged 16 and over filled in the questionnaire. The population coverage was 0.09 per cent. Table 6.1 shows the number of respondents for each tax or benefit programme under study.

Table 6.1 Sample size and population coverage

	Sample size	Population (a) (1,000)	Population coverage (%)
Individuals aged 16 and over	10,992	12,100	0.09
Personal income tax returns	4,743	5,300	0.09
Wealth tax returns	319	590	0.05
Rent subsidy recipients	750	960	0.08
Benefit recipients	1,154	1,800	0.06
of which: - AWW	141	190	0.08
- AAW/WAO	524	900	0.06
- RWW/BZ	183	310	0.06
- WW	146	230	0.06
- ABW/IOAW/IOAZ	160	210	0.08

(a) Sources: individuals: SCP; tax returns: TCA [1991 issue]; rent subsidy recipients (in 1991/92): VROM [c, p. 19]; benefit recipients (end of 1991): private communication CBS

6.1.5 Representativeness

Table 6.1 shows that wealth tax payers are under-represented in the sample. The same is true of recipients of certain social security benefits (AAW/WAO, RWW/BZ and WW). Table 6.2 compares age and gender of respondents with demographic characteristics of the Dutch population at large. The lowest and highest age groups seem to be somewhat under-represented, but differences are very small. The proportions of men and women in the sample reflect the gender composition of the population. On the whole, the sample seems to represent the Dutch population rather well. Thus, no weighting of the survey results is necessary. With respect to the subsample of taxpayers, however, the situation is different: some groups of taxpayers are over-represented. Because compliance costs may be expected to be related to type of tax form completed, the results regarding PIT have been weighted by tax form, using population data supplied by the Tax and Customs Administration (TCA).

Table 6.2 Comparison of sample with population (%)

	Sample	Population
Age		
16-24	16	18
25-34	23	21
35-44	21	20
45-54	14	14
55-64	11	12
65+	14	16
Total	100	100
Gender		
Men	49	49
Women	51	51
Total	100	100

Source: CBS, private communication.

Contrary to our business survey, and as a consequence of the co-operation of the SCP, the household survey is not exclusively, or even primarily, concerned with compliance costs. Thus, no non-response bias towards persons resenting compliance work, or towards persons feeling heavily burdened by compliance costs (and wanting to do something about it by influencing survey outcomes), is to be expected. Therefore, and because non-response has been much less of a problem than in the case of the business survey, possible non-response bias has not been analysed.

6.1.6 Data handling

The survey data have been processed using SPSSX on a mainframe computer.

Because respondents could hardly be expected to remember *exactly* the time and money spent on compliance, they were asked to answer by ticking one of several precoded boxes (e.g. 5-10 hours). One of the advantages of this approach, given the limited space available, is that more compliance costs questions could thus be included in the questionnaire[108]. The results are presented mainly in contingency tables, accompanied by several associated statistics. Appendix C gives a non-technical explanation of the use of such statistics. In order to be able to use the Chi-square test, categories in contingency tables have been combined whenever necessary[109]. Because of partial non-response, the number of respondents may vary between tables.

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[108] A number indicating a category takes up only one position on a data file, whereas a number of hours or an amount of money usually requires more positions; e.g. Gld 100 will take up three positions.

[109] The expected values should be 1 or greater, and no more than one cell out of five should have an expectation of less than 5 (see Everitt [1980, p. 40]).

As a result of the use of precoded answers, *averages* can only be calculated on the basis of certain assumptions. Some degree of arbitrariness is inevitable here. We will assume that the average within a category is the mid-point of that category, except for the highest category, where no mid-point exists. The assumptions made for the highest time and money categories are summarised in table 6.3. Fortunately, the score on the highest category is generally low. Sensitivity analysis shows that the assumed averages within the highest categories must be changed considerably in order to arrive at significantly different results. However, the fact remains that averages calculated in this way are no more than somewhat arbitrary summaries of underlying frequency distributions.

Table 6.3 Assumptions on average values in the highest time and money categories

	Category	'Average'
Taxes	hours 15+	20 hours
	Gld 500+	Gld 750
Benefits	hours 10+	15 hours
	Gld 100+	Gld 125
Rent subsidy	hours 6+	7.5 hours
	Gld 100+	Gld 125

6.1.7 Time valuation

Section 3.3.3 discussed various ways in which time (spent) may be converted into money. As a measure of the value to society of time spent on compliance with government programmes, GDP per labour year has been used here. Thus, the cost of one hour devoted to compliance work is set at Gld 55. The reader who wishes to value time differently, is free to do so: results are presented both in guilders and in hours spent.

6.2 Personal Income Tax

6.2.1 General

Personal income tax (PIT) returns[110] are filed in the calender year following the tax year. Taxpayers known to the Tax and Customs Administration receive a tax return automatically. Others have to apply for their tax form. Normally, returns are filed before the first of April, but it is possible to ask for postponement.

[110] As from 1990, general social insurance contributions are levied jointly with PIT. The lowest rate is a combined rate for PIT and contributions. The two higher rates are purely income tax rates. For simplicity, we refer to PIT or tax returns, without mentioning social insurance contributions.

There are four main types of tax return. The standard form is the A-form. It covers all income categories to which PIT applies. The majority of taxpayers have only rather simple tax affairs. For them it suffices to complete an E-form, which is essentially a shortened A-form. Taxpayers who have to file for PIT and wealth tax as well, receive a B-form. Individuals who are entitled to a refund - because too much wage tax has been withheld - but who do not have to complete one of the forms mentioned before, (e.g. students doing holiday jobs) may apply for a T-form. Because compliance costs may be expected to depend heavily on the type of tax form, survey results have been weighted by kind of form[111].

Below we refer repeatedly to 'the compliance costs of filing a return'. Such wording should not be interpreted too narrowly, however. Compliance costs of filing a tax return are not limited to the actual filling out of the tax form; they include the costs of acquiring the necessary information, record keeping, etc.

6.2.2 Costs per taxpayer

The average taxpayer spends three hours filing his or her tax return. About one-third of taxpayers need only half an hour or less (table 6.4). On the other hand, 4 per cent invest over fifteen hours. The average taxpayer gets an hour and a half of unpaid help. In more than half of the cases, the unpaid help amounts to half an hour or less. Average money costs amount to Gld 77. However, about 50 per cent of taxpayers spent no money at all. The cost category Gld 20-50 houses a relatively large number of taxpayers; the price of a typical taxpayer's handbook lies in this range. Of all taxpayers, 5 per cent spend over Gld 500.

Table 6.4 Time and money spent on personal income tax returns 1990 (filed in 1991)

Time (hours)	Taxpayers' time		Unpaid help		Money costs (Gld)		
	n	%	n	%		n	%
0-0.5	1,234	31	1,414	52	0	2,257	52
0.5-1.5	660	17	545	20	0-20	351	8
1.5-2.5	592	15	341	12	20-50	558	13
2.5-3.5	442	11	169	6	50-75	287	7
3.5-5	467	12	147	5	75-100	214	5
5-10	292	7	59	2	100-200	276	6
10-15	111	3	18	1	200-500	174	4
15+	140	4	36	1	500+	230	5
Total	3,938	100	2,729	100	Total	4,346	100

Taxpayers own time, unpaid help and money costs all show small but statistically significant correlations (table 6.5). There seems to be a trade-off between the three

[111] The weighting procedure has had a limited effect on outcomes. Almost all correlations mentioned in this study, although not equally strong, are found without weighting. Average time or money spent are not greatly influenced either.

Table 6.5a Taxpayers' time and money spent on PIT return 1990

	Taxpayers' time (hours)															
	0-0.5		0.5-1.5		1.5-2.5		2.5-3.5		3.5-5		5-10		10-15		15+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Money costs (Gld)																		
0	558	−15	332	9	350	+9	277	+7	285	+ 7	144	4	42	− 1	27	− 1	2,014	53
0-20	50	− 1	39	− 1	42	1	46	1	79	+ 2	48	+1	17	+ 1	20	+ 1	341	9
20-50	155	4	91	2	69	2	46	1	50	1	40	1	25	+ 7	21	1	497	13
50-75	113	+ 3	58	+ 2	34	1	5	− 0	8	− 0	11	0	4	0	13	0	246	6
75-100	78	+ 2	42	+ 1	29	1	12	0	9	− 0	3	− 0	6	0	3	0	182	5
100-200	106	+ 3	49	1	23	− 1	24	1	13	− 0	16	0	3	0	3	− 0	236	6
200-500	65	+ 2	17	0	20	1	6	− 0	11	0	6	0	4	0	6	0	135	4
500+	64	2	16	− 0	14	− 0	11	− 0	10	− 0	15	0	7	0	44	+ 1	181	5
Total	1,189	31	643	17	581	15	427	11	465	12	283	7	108	3	135	4	3,832	100

Table 6.5b Unpaid help cross-tabulated with taxpayers' time and money spent on PIT return 1990

	Unpaid help (hours)													
	0-0.5		0.5-1.5		1.5-2.5		2.5-3.5		3.5-5		5+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)														
0-0.5	430	−18	183	+ 8	117	5	54	2	57	2	36	2	878	36
0.5-1.5	192	− 8	127	+ 5	53	2	13	− 1	12	− 1	16	1	412	17
1.5-2.5	194	8	42	− 2	67	+ 3	14	1	10	− 0	9	0	336	14
2.5-3.5	164	+ 7	29	− 1	19	− 1	28	+ 1	9	0	5	0	254	11
3.5-5	179	+ 7	28	− 1	13	− 1	10	0	27	+ 1	3	− 0	259	11
5-10	123	+ 5	16	− 1	6	− 0	6	0	8	0	11	+ 1	171	7
10-15	31	1	4	0	7	0	3	0	2	0	1	0	48	2
15+	28	1	8	0	7	0	0	0	4	0	10	+ 0	57	2
Total	1,342	56	437	18	288	12	127	5	130	5	92	4	2,416	100
Money costs (Gld)														
0	769	−29	375	+14	200	8	106	4	93	4	57	2	1,600	60
0-20	130	5	37	1	38	1	11	0	13	1	5	0	234	9
20-50	169	6	59	2	39	2	24	1	14	1	10	0	315	12
50-75	91	+ 3	16	− 1	23	1	4	0	2	− 0	5	0	141	5
75-100	44	2	15	1	13	1	5	0	3	0	2	0	81	3
100-200	76	+ 3	19	1	11	0	4	0	5	0	7	0	122	5
200-500	41	+ 2	5	− 0	1	− 0	6	0	5	0	4	0	62	2
500+	62	+ 2	7	− 0	5	− 0	1	− 0	4	0	18	+ 1	98	4
Total	1,383	52	532	20	330	12	161	6	140	5	109	4	2,654	100

Percentages marked + or − differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxp.time/money	583	49	99.99	0.15	-0.06	99.99	-0.08
Help/Taxp.time	241	35	99.99	0.14	-0.08	99.99	-0.14
Help/money	139	35	99.99	0.10	-0.05	99.99	-0.11

components of compliance cost. However, cost components can also be complementary. Time spent by taxpayers relatively often corresponds with time spent by family members or friends helping them, which suggests that the tax form was completed together. One-third of taxpayers devoting over fifteen hours to their tax return also paid more than Gld 500 (table 6.5a). One quarter of those spending over Gld 500 also needed more than fifteen hours to complete their income tax return.

6.2.3 Costs and taxpayer profiles

The AVO-survey gathers information on a host of socio-demographic characteristics of respondents. Six such items were selected for further analysis: sex, age, education, income, main income source and number of supplementary income sources. Because of the correlation between these variables, no conclusions could be drawn as to the *causality* of a possible relationship with the level of compliance costs. If we should find, as we will, that highly educated taxpayers devote more time to their tax affairs than others, this result may not be interpreted to imply that higher education *causes* taxpayers to spend more time on tax matters. More plausibly, highly educated taxpayers enjoy higher incomes and have, therefore, more complicated tax affairs. What we can do here, is identify ways in which taxpayer profiles are *related* to compliance cost levels.

Men spend more time on their income tax return than *women*, but women receive more help (table 6.6). Money costs of men and women are quite similar.

Taxpayers' time spent on the tax return and money costs increase with *age* (table 6.7). Unpaid help from family members, friends, etc. is not related to age.

Time spent by the taxpayer increases with *education*, whereas unpaid help and money costs decrease slightly but significantly with better schooling. University graduates, however, relatively often get over five hours of unpaid help, and relatively frequently spend more than Gld 500.

The same goes for net *household income*: higher income taxpayers devote more time to their tax affairs (table 6.8). Unpaid help and money costs decrease somewhat with income, but individuals in the highest income category receive more unpaid help and spend more money to get tax assistance.

Compliance costs vary by type of *tax form* (table 6.9). Filling out an A-form (the 'standard' form) takes up about average quantities of time and money. Taxpayers with simple tax affairs, who file an E-return, are over-represented in time categories from one and a half up to five hours. This group does not spend much money on tax assistance.

Completion of a B-return (income tax payers who also have to file for wealth tax) costs a lot of time and money. Of all B-filers, 10 per cent need more than fifteen hours (all taxpayers: 4 per cent). Help received from friends or family members is also substantial, and so are money costs: in a quarter of all cases, these exceed Gld 500 (all taxpayers: 5 per cent).

T-forms take little time or money. Relatively often, help is needed, but not much. A fifth of all taxpayers did not know which form they had received. This

group spends relatively little time on their tax return, whereas money costs are high. Such taxpayers probably make more use of paid tax preparers, which may also explain why they were not aware of the type of form they received.

Another important determinant of compliance costs is *main source of income* (table 6.10). Here we distinguish six income categories: employment income, profits or self-employment income, social security benefits, pensions (including AOW), a combination of the above, and 'none/don't know'.

Taxpayers with employment income relatively often need between half an hour and five hours to complete their tax return. For this category, unpaid help is around the average level, and money costs are generally low.

Self-employed taxpayers are over-represented in the extreme low and high time categories. Almost half of them spend half an hour or less on income tax matters, whereas 18 per cent need over fifteen hours (all taxpayers: 4 per cent). Help from family members or friends is also often either in the lowest or the highest time category. Money costs are extremely high: only 17 per cent do not spend money on their tax return (all taxpayers: 52 per cent). Almost half of the self-employed spend more than Gld 500 (all taxpayers: 5 per cent). These results may be interpreted to imply that self-employed can be divided into two groups: those who prepare their own return, investing a lot of time and getting (unpaid) help, and those who have a professional tax preparer doing the job, needing less time of their own and help from friends or family members. In both cases, total compliance costs are very high compared with those of other groups of taxpayers.

Taxpayers receiving social security benefit relatively often spend over ten hours on their tax return. Otherwise, their compliance costs do not differ much from the average. This is even more true of pensioners; they only differ from the average in that relatively few of them spend more than Gld 500 on their return.

Taxpayers, receiving income from more than one of the sources mentioned above, incur above average compliance costs. Money costs are especially high: for 12 per cent, these amount to more than Gld 500 (all taxpayers: 5 per cent). Those without income from the sources mentioned here, or those who answered 'don't know', incur about average compliance costs.

The *number of supplementary income sources* (bonus, overtime work, etc.) is related positively to the time taxpayers spend, but not to the amount of unpaid help they receive.

To summarise: the time taxpayers spend on their income tax return increases with age, education and household income, and, relatively often, more time is spent by men, wealth tax payers and individuals receiving a social security benefit, or income from several sources.

Unpaid help from family members or friends is relatively substantial for women and wealth tax payers, and decreases somewhat as schooling or income rises.

Money costs are generally high for wealth tax payers, individuals who do not know which tax form they received, and taxpayers with several income sources; costs increase with age and decrease slightly with education and income.

Compliance costs are particularly high for the self-employed.

Table 6.6 Time and money spent on income tax return 1990; men and women

	Men		Women		Total	
	n	%	n	%	n	%
Taxpayers' time (hours)						
0-0.5	674 —	25	560 +	45	1,234	31
0.5-1.5	434	16	227	18	660	17
1,5-2.5	442 +	16	150 —	12	592	15
2.5-3.5	355 +	13	87 —	7	442	11
3.5-5	371 +	14	97 —	8	467	12
5-10	223 +	8	70 —	6	292	7
10-15	93 +	3	18 —	1	111	3
15+	101	4	39	3	140	4
Total	2,691	100	1,248	100	3,938	100
Unpaid help (hours)						
0-0.5	986 +	57	428 —	43	1,414	52
0.5-1.5	325 —	19	220 +	22	545	20
1.5-2.5	191 —	11	150 +	15	341	12
2.5-3.5	91 —	5	78 +	8	169	6
3.5-5	84	5	63	6	147	5
5-10	28 —	2	31 +	3	59	2
10-15	9	1	9	1	18	1
15+	25	1	11	1	36	1
Total	1,738	100	991	100	2,729	100
Money costs (Gld)						
0	1,486	51	771	54	2,257	52
0-20	246	8	104	7	351	8
20-50	401 +	14	156 —	11	558	13
50-75	174 —	6	113 +	8	287	7
75-100	138	5	75	5	214	5
100-200	175	6	102	7	276	6
200-500	112	4	62	4	174	4
500+	173 +	6	57 —	4	230	5
Total	2,907	100	1,439	100	4,346	100

Percentages marked + or — differ significantly from other categories (95% confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxpayers' time	197	7	99.99	0.22	-0.22	99.99	-0.31
Help	54	7	99.99	0.14	0.13	99.99	0.21
Money	24	7	99.90	0.07	-0.02	85	-0.03

Table 6.7 Time and money spent on income tax return 1990; by age group

	Age group													
	16-24		25-34		35-44		45-54		55-64		65+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)														
0-0.5	76	+57	399	+35	342	30	154	−24	110	−25	153	35	1,234	31
0.5-1.5	23	17	200	18	210	18	103	16	69	16	55	−12	660	17
1.5-2.5	15	12	178	16	169	15	103	16	68	15	58	13	592	15
2.5-3.5	11	8	121	11	133	12	81	13	55	13	40	9	442	11
3.5-5	5	−4	136	12	158	+14	72	11	51	12	45	10	467	12
5-10	1	−1	68	−6	92	8	57	9	39	9	36	8	292	7
10-15	0	−0	20	−2	17	−1	23	4	25	+6	27	+6	111	3
15+	3	2	15	−1	36	3	35	+6	22	5	29	+6	140	4
Total	135	100	1,138	100	1,157	100	628	100	440	100	442	100	3,938	100
Unpaid help (hours)														
0-0.5	59	52	447	52	390	53	219	52	143	48	156	53	1,414	52
0.5-1.5	27	24	185	21	144	20	85	20	54	18	50	17	545	20
1.5-2.5	13	11	107	12	93	13	48	11	40	14	40	14	341	12
2.5-3.5	10	9	54	6	47	6	22	5	20	7	16	5	169	6
3.5-5	2	2	51	6	33	5	23	5	23	+8	14	5	147	5
5-10	0	0	13	1	13	2	15	+4	6	2	12	+4	59	2
10+	1	1	10	−1	17	2	12	3	9	3	5	2	54	2
Total	113	100	867	100	737	100	425	100	296	100	291	100	2,729	100
Money costs (Gld)														
0	98	+68	674	+56	656	53	332	−46	249	50	248	−47	2,257	52
0-20	9	6	120	+10	89	7	51	7	35	7	46	9	351	8
20-50	17	12	154	13	163	13	101	14	70	14	53	−10	558	13
50-75	9	6	91	8	80	6	44	6	27	5	36	7	287	7
75-100	3	2	46	−4	68	5	38	5	26	5	32	6	214	5
100-200	2	−2	67	6	69	6	65	+9	33	6	40	8	276	6
200-500	3	2	24	−2	45	4	34	5	32	+6	34	+6	174	4
500+	2	−1	28	−2	71	6	59	+8	30	6	39	+7	230	5
Total	144	100	1,205	100	1,242	100	725	100	502	100	528	100	4,346	100

Percentages marked + or − differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxpayers' time	178	35	99.99	0.10	0.10	99.99	0.13
Help	35	30	77	0.05	0.02	87	0.02
Money	131	35	99.99	0.08	0.08	99.99	0.13

Table 6.8 Time and money spent on income tax return 1990; by net household income

	Net household income (Gld 1,000)																	
	0-20		20-26		26-31		31-37		37-43		43-50		50-64		64+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)																		
0-0.5	52	38	125	+45	142	+36	139	+36	120	30	99	−26	192	29	136	−23	1,005	31
0.5-1.5	29	22	45	16	93	+24	88	+23	77	19	62	16	97	−15	79	−13	571	18
1.5-2.5	18	13	39	14	70	18	60	15	56	14	58	15	105	16	91	15	497	15
2.5-3.5	9	6	10	− 4	32	8	31	8	67	+16	58	+15	75	11	72	12	355	11
3.5-5	13	10	26	9	27	− 7	42	11	36	− 9	60	+15	90	14	94	+16	389	12
5-10	5	4	18	6	16	− 4	14	− 4	27	7	30	8	54	8	73	+12	236	7
10-15	4	3	6	2	3	− 1	9	2	15	4	11	3	25	4	26	+ 4	99	3
15+	5	4	10	4	12	3	7	2	8	2	8	2	21	3	27	+ 5	98	3
Total	135	100	277	100	397	100	390	100	407	100	386	100	659	100	599	100	3,249	100
Unpaid help (hours)																		
0-0.5	51	44	102	49	134	−45	127	−46	153	54	153	56	236	56	217	55	1,172	52
0.5-1.5	35	+31	41	20	69	23	76	+27	59	21	45	16	81	19	60	−15	466	21
1.5-2.5	17	14	23	11	54	+18	43	16	38	13	24	− 9	44	10	40	10	282	12
2.5-3.5	7	6	17	8	16	5	15	5	18	6	19	7	25	6	25	6	141	6
3.5-5	4	3	12	6	16	5	11	4	10	4	24	+ 9	20	5	23	6	120	5
5-10	1	1	8	4	5	2	1	− 1	4	2	3	1	13	3	16	+ 4	51	2
10+	0	0	5	2	2	1	3	1	0	− 0	8	3	6	1	13	+ 3	36	2
Total	115	100	208	100	295	100	277	100	282	100	276	100	424	100	394	100	2,269	100
Money costs (Gld)																		
0	81	51	182	54	210	−47	204	−47	245	53	239	57	384	57	359	57	1,904	53
0-20	22	+14	24	7	36	8	27	6	43	9	29	7	61	9	51	8	293	8
20-50	14	9	29	− 9	69	15	82	+19	60	13	57	14	81	12	83	13	475	13
50-75	12	8	20	6	40	+ 9	34	8	30	7	32	8	43	6	24	− 4	236	7
75-100	7	4	27	+ 8	20	5	30	+ 7	30	7	14	3	26	4	17	− 3	171	5
100-200	12	7	31	+ 9	36	8	35	8	19	− 4	28	7	32	5	27	− 4	219	6
200-500	7	4	9	3	18	4	11	3	23	5	7	− 2	28	4	27	4	129	4
500+	4	3	13	4	18	4	10	2	9	− 2	11	3	24	4	46	+ 7	134	4
Total	159	100	335	100	446	100	433	100	459	100	417	100	678	100	633	100	3,561	100

Percentages marked + or − differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxpayers' time	201	49	99.99	0.09	0.14	99.99	0.17
Help	94	42	99.99	0.08	-0.03	98.0	-0.05
Money	139	49	99.99	0.07	-0.04	99.94	-0.06

Table 6.9 Time and money spent on income tax return 1990; by tax form

	A-form		E-form		B-form		T-form		Other/unknown		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)												
0-0.5	212	— 26	500	— 26	80	— 26	102	+ 44	340	+ 53	1,234	31
0.5-1.5	133	16	334	17	26	— 8	52	+ 23	116	18	660	17
1.5-2.5	134	16	322	+ 17	35	12	35	15	65	— 10	592	15
2.5-3.5	100	12	268	+ 14	27	9	15	— 6	32	— 5	442	11
3.5-5	99	12	275	+ 14	43	14	16	— 7	34	— 5	467	12
5-10	88	+ 11	139	7	40	+ 13	7	— 3	18	— 3	292	7
10-15	21	3	56	3	22	+ 7	3	1	10	— 2	111	3
15+	34	4	42	— 2	31	+ 10	2	— 1	31	5	140	4
Total	821	100	1,936	100	304	100	231	100	646	100	3,938	100
Unpaid help (hours)												
0-0.5	276	50	726	53	103	59	80	— 41	229	51	1,414	52
0.5-1.5	105	19	259	19	18	— 10	58	+ 30	106	+ 24	545	20
1.5-2.5	66	12	182	13	18	10	23	12	52	12	341	12
2.5-3.5	47	+ 9	76	6	6	3	18	9	21	5	169	6
3.5-5	29	5	74	5	11	6	10	5	24	5	147	5
5-10	15	3	22	2	12	+ 7	4	2	6	1	59	2
10+	11	2	19	— 1	9	+ 5	3	1	12	3	54	2
Total	549	100	1,358	100	176	100	196	100	450	100	2,729	100
Money costs (Gld)												
0	447	49	1,238	+ 60	98	— 29	154	58	320	— 41	2,257	52
0-20	66	7	220	+ 11	11	— 3	19	7	35	— 5	351	8
20-50	111	12	297	+ 14	46	13	31	11	73	— 9	558	13
50-75	54	6	125	6	11	— 3	22	8	75	+ 10	287	7
75-100	56	+ 6	68	— 3	11	3	17	6	62	+ 8	214	5
100-200	69	8	72	— 4	34	+ 10	18	7	83	+ 11	276	6
200-500	40	4	35	— 2	43	+ 13	4	— 1	52	+ 7	174	4
F500+	62	+ 7	7	— 0	87	+ 26	2	— 1	72	+ 9	230	5
Total	904	100	2,063	100	340	100	267	100	772	100	4,346	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V
Taxpayers' time	358	28	99.99	0.16
Help	78	24	99.99	0.08
Money	757	28	99.99	0.21

Table 6.10 Time and money spent on income tax return 1990; by main source of income

	Employment		Self-employment		Soc. sec. benefit		Pension/ AOW		Combi-nation		None		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)														
0-0.5	665	−28	101	+47	132	36	117	31	73	27	146	+ 46	1,234	31
0.5-1.5	429	+18	17	− 8	53	14	73	19	37	14	51	16	660	17
1.5-2.5	407	+17	13	− 6	49	13	54	14	32	12	36	12	592	15
2.5-3.5	290	+12	12	− 6	28	− 8	48	13	35	13	28	9	442	11
3.5-5	313	+13	10	− 5	36	10	42	11	42	+16	24	− 8	467	12
5-10	188	8	15	7	32	8	24	7	20	7	13	− 4	292	7
10-15	54	− 2	8	4	20	+ 5	11	3	11	4	7	2	111	3
15+	46	− 2	38	+18	22	+ 6	7	2	18	+ 7	9	3	140	4
Total	2,393	100	214	100	371	100	376	100	269	100	315	100	3,938	100
Unpaid help (hours)														
0-0.5	860	52	72	+63	142	55	143	50	92	51	106	47	1,414	52
0.5-1.5	350	21	11	−10	45	17	55	19	28	15	56	25	545	20
1.5-2.5	209	13	3	− 3	30	11	40	14	30	17	29	13	341	12
2.5-3.5	113	7	5	4	13	5	14	5	5	− 3	18	8	169	6
3.5-5	85	5	6	5	13	5	21	7	11	6	10	4	147	5
5-10	30	2	5	5	11	+ 4	4	1	7	4	3	1	59	2
10+	20	− 1	12	+11	5	2	7	2	8	+ 4	4	2	54	2
Total	1,667	100	115	100	259	100	284	100	180	100	225	100	2,729	100
Money costs (Gld)														
0	1,495	+58	40	−17	213	48	215	51	121	−40	174	− 46	2,257	52
0-20	211	8	5	− 2	34	8	36	9	35	+12	30	8	351	8
20-50	365	+14	10	− 4	42	− 9	56	13	32	11	53	14	558	13
50-75	183	7	5	− 2	33	7	31	7	15	5	21	6	287	7
75-100	110	− 4	6	3	27	6	25	6	16	5	30	+ 8	214	5
100-200	131	− 5	26	+11	36	8	29	7	25	8	29	8	276	6
200-500	56	− 2	29	+13	30	+ 7	22	5	21	+ 7	16	4	174	4
500+	25	− 1	111	+48	29	6	4	− 1	36	+12	23	6	230	5
Total	2,576	100	232	100	443	100	418	100	301	100	376	100	4,346	100

Percentages marked + or − differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V
Taxpayers' time	305	35	99.99	0.12
Help	107	30	99.99	0.09
Money	1,182	35	99.99	0.23

6.2.4 Costs of audits and tax appeals

After filing an income tax return, audits and tax appeals may generate additional compliance costs. Because it is not always easy to attribute these costs to a specific tax year, respondents were asked about the time and money spent on audits, tax appeals and the like in the year 1990, regardless of the tax years involved. Unfortunately, the answers to this question suggest that many respondents misunderstood the question as referring to the costs of *filing* their return in that year.

The first reason for this suspicion is that money costs are relatively often claimed to be in the category Gld 20-50, as was the case with money costs of filing a return. In this range lies the price of a typical taxpayer's guide.

More important, however, is that there is a strong correlation between time and money spent on filing the return and time and money claimed to have been spent on audits and tax appeals: 64, 77, and 81 per cent of respondents claimed the same amount of taxpayer's time, unpaid help and money costs, respectively. Therefore we must conclude that the questions on compliance costs of audits and tax appeals have failed to be understood properly by most respondents.

6.2.5 Total costs of income tax returns

All 5.3 million tax returns take up an estimated 24m hours, or 14 thousand labour years[112]. At Gld 55 an hour, total time costs amount to Gld 1.3bn. Total money costs are estimated at Gld 400m. So, total compliance costs are Gld 1.7bn, or 32 per cent of revenue. Included here are the costs of preparing and filing a return, not the additional costs of audits or tax appeals.

6.2.6 Comparison with results of business survey

Compliance costs of personal income tax for business owners have already been estimated in Chapter 5, using results of the business survey. These results can be compared with replies by self-employed in the household survey. Individuals receiving income from profit or self-employment make up for about 10 per cent of the response. In order to exclude compliance costs resulting from other main income sources (employment, pension, etc.), only respondents with no other main income source than self-employment are included. The comparison is still far from perfect, however: in the business survey, compliance costs were defined as all costs (in 1989) that would not be incurred in the absence of the tax, whereas in the household survey only the costs of preparing and filing the 1990 return are included. Moreover, the business survey was based on the database of the

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[112] Average time spent per return amounts to 4.5 hours (3 hours of taxpayers' own time, plus 1.5 hours unpaid help); a labour year is set at 1,700 hours. Average money costs amount to Gld 77 per taxpayer.

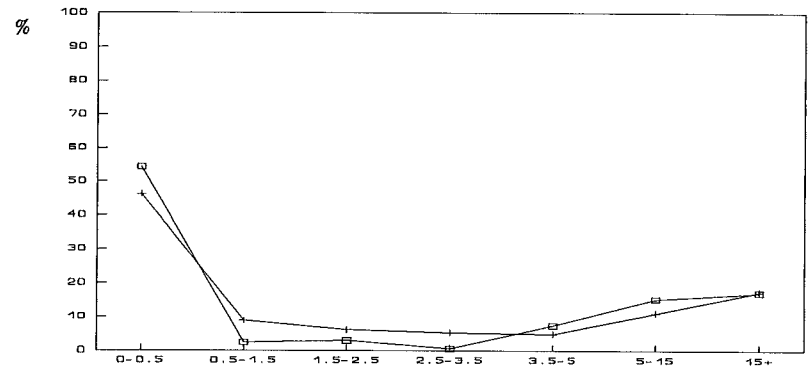
Chambers of Commerce, which does not include all professionals, whereas agriculture was excluded from this survey altogether.

First, we compare the *frequency distributions* of time and money spent in both surveys. Tax work resulting from supplementary income sources (e.g. interest) is included in the household survey, but not in the business survey. Nevertheless, frequency distributions based on both surveys show remarkably similar patterns (figure 6.1). A great number of self-employed spends hardly any time on income tax, whereas the others tend to spend a great amount of time (according to both surveys, 17 per cent spends more than 15 hours). A good part of the work is contracted out: according to both surveys, half of the self-employed incurred money costs of over Gld 500. The only marked difference between the results of both surveys is in the amount of unpaid help received. Respondents to the business survey receive almost no such help (87 per cent receives half an hour or less), whereas the self-employed responding to the household survey relatively often report between half an hour and five hours of help.

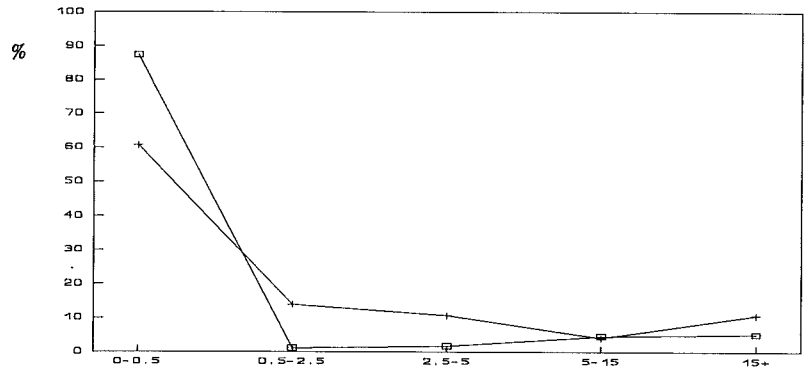
The estimates of the *magnitude* of the costs based on both surveys can also be compared. According to the household survey, the costs of preparing and filing income tax returns for the self-employed amount to 28 per cent of total costs to PIT payers: Gld 480m. Based on data from the business survey, compliance costs of personal income tax have been estimated between Gld 420m and Gld 750m (table 5.3.4). Here all tax work not related to self-employment income is excluded, whereas costs apart from filing (audits, tax appeals) are now included.

Although the comparison is not straightforward, we may conclude that results based on the two surveys are remarkably consistent. The amount of unpaid help clearly differs somewhat for both surveys; no obvious explanation has been found. Fortunately, unpaid help is only a minor component of compliance costs.

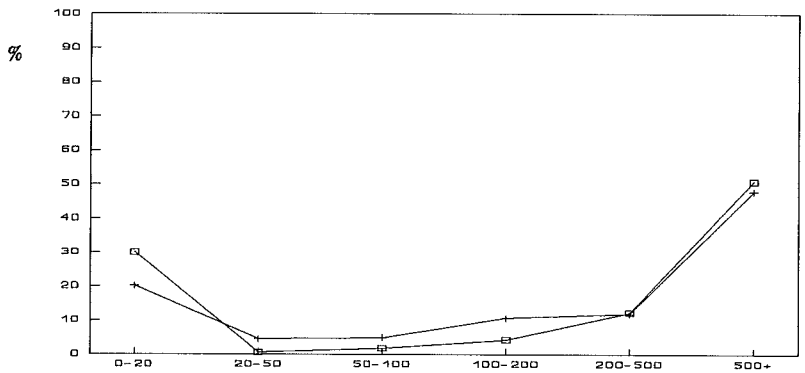
Figure 6.1 Comparison of results of business survey and household survey: frequency distributions of time and money spent by self-employed on income tax
(legend: □ business survey; + household survey)



Taxpayers' time (hours)



Unpaid help (hours)



Money costs (Gld)

6.3 Wealth Tax

6.3.1 General

The wealth tax return is filed together with the income tax return, since there is a combined form for both taxes (the B-form). Wealth tax is levied on the net wealth of individuals at the beginning of the calendar year. The return is filed the same year, generally before 1 April. In order to include compliance costs related to tax appeals etc., respondents were asked to indicate time and money spent on wealth tax compliance in 1990.

6.3.2 Costs per taxpayer

The average taxpayer spent two and a quarter hours on wealth tax matters. Nearly 50 per cent of wealth tax payers needed only half an hour or less (Table 6.11). Unpaid help from family members or friends amounted to one and a half hour on average. Only 30 per cent of taxpayers needed help for more than half an hour. Money costs of wealth tax were quite substantial. Almost a quarter of taxpayers spent over Gld 500. Average costs amounted to Gld 225. Obviously, many taxpayers needed professional help, from assessors, tax preparers and the like.

No evidence has been found of a trade-off or complementary relationships between taxpayers' time spent, unpaid help or money costs, as was the case with PIT.

Table 6.11 Time and money spent on wealth tax in 1990

Time (hours)	Taxpayers' time		Unpaid help		Money costs (Gld)		
	n	%	n	%		n	%
0-0.5	123	47	112	70	0	103	38
0.5-1.5	62	23	17	11	0-20	19	7
1.5-2.5	22	8	12	7	20-50	20	7
2.5-3.5	13	5	3	2	50-75	10	4
3.5-5	17	6	6	4	75-100	8	3
5-10	12	5	5	3	100-200	26	10
10-15	5	2	3	2	200-500	25	9
15+	10	4	3	2	500+	62	23
Total	264	100	161	100	Total	273	100

6.3.3 Costs and taxpayer profiles

Time spent by taxpayers was found to vary by four socio-demographic characteristics. Men devote significantly more time to wealth tax compliance than women (table 6.12). Besides, taxpayers' time spent increases with age (table 6.13),

education, and household income (table 6.14). Unpaid help and money costs decrease with level of schooling; they are not related to sex, age or income.

Table 6.12 Time and money spent on wealth tax in 1990; men and women

	Men		Women		Total	
	n	%	n	%	n	%
Taxpayers' time (hours)						
0-0.5	75	— 40	48	+ 64	123	47
0.5-1.5	50	26	12	16	62	23
1.5-2.5	18	10	4	5	22	8
2.5-3.5	12	6	1	1	13	5
3.5-10	22	12	7	9	29	11
10+	12	6	3	4	15	6
Total	189	100	75	100	264	100
Unpaid help (hours)						
0-0.5	81	72	31	63	112	70
0.5+	31	28	18	37	49	30
Total	112	100	49	100	161	100
Money costs (Gld)						
0	76	38	27	38	103	38
0-20	16	8	3	4	19	7
20-50	14	7	6	8	20	7
50-75	8	4	2	3	10	4
75-100	7	3	1	1	8	3
100-200	20	10	6	8	26	10
200-500	16	8	9	13	25	9
500+	44	22	18	25	62	23
Total	201	100	72	100	273	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxpayers' time	14	5	98.42	0.23	-0.19	99.94	-0.35
Help	1	1	66	0.09	0.09	87	0.21
Money	4	7	20	0.12	0.03	72	0.06

Table 6.13 Time and money spent on wealth tax in 1990; by age group

	16-34		35-44		45-54		55-64		65+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)												
0-0.5	22	56	43	+ 57	18	42	16	40	24	— 36	123	47
0.5-1.5	9	23	20	27	10	23	7	17	16	24	62	23
1.5-3.5	3	8	5	— 7	8	19	9	22	10	15	35	13
3.5+	5	13	7	— 9	7	16	8	20	17	+ 25	44	17
Total	39	100	75	100	43	100	40	100	67	100	264	100
Unpaid help (hours)												
0-0.5	18	82	34	69	11	— 46	18	72	31	76	112	70
0.5+	4	18	15	31	13	+ 54	7	28	10	24	49	30
Total	22	100	49	100	24	100	25	100	41	100	161	100
Money costs (Gld)												
0	12	34	36	+ 47	15	31	15	35	25	35	103	38
75	7	20	9	12	11	23	4	9	18	25	49	18
75-500	7	20	18	24	11	23	13	30	10	14	59	22
500+	9	26	13	17	11	23	11	26	18	25	62	23
Total	35	100	76	100	48	100	43	100	71	100	273	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxpayers' time	19	12	91	0.15	0.17	99.97	0.24
Help	9	4	93	0.23	0.01	55	0.02
Money	14	12	71	0.13	0.03	79	0.04

Table 6.14 Time and money spent on wealth tax in 1990; by net household income

	Net household income (Gld 1,000)									
	0-31		31-50		50-64		64+		Total	
	n	%	n	%	n	%	n	%	n	%
Taxpayers' time (hours)										
0-0.5	14	40	28 +	62	16	44	22 —	30	80	42
0.5-1.5	7	20	7	16	10	28	21	29	45	24
1.5-3.5	8	23	3	7	5	14	12	16	28	15
3.5+	6	17	7	16	5	14	18	25	36	19
Total	35	100	45	100	36	100	73	100	189	100
Unpaid help (hours)										
0-0.5	17	65	20	65	13	68	26	67	76	66
0.5+	9	35	11	35	6	32	13	33	39	34
Total	26	100	31	100	19	100	39	100	115	100
Money costs (Gld)										
0	17	44	19	43	16	44	32	45	84	44
75	5	13	10	23	9	25	15	21	39	21
75-500	9	23	14 +	32	4	11	8 —	11	35	18
500+	8	21	1 —	2	7	19	16	23	32	17
Total	39	100	44	100	36	100	71	100	190	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Taxpayers' time	15	9	91	0.16	0.12	97	0.17
Help	.1	3	1	0.03	-0.02	57	-0.03
Money	17	9	95	0.17	-0.01	55	-0.01

6.3.4 Total costs of wealth tax

The total amount of time spent on wealth tax in 1990 was 2.2m hours, or 1,300 labour years[113]. Valued at Gld 55 an hour, time costs amount to Gld 120m. Money costs are Gld 130m, which brings total compliance costs up to Gld 250m, no less than 17 per cent of revenue collected.

6.4 Rent subsidy

6.4.1 General

Rent subsidy (IHS) must be applied for by filling in a form and showing photocopies of tax returns or other documents providing information on household

[113] A total of 586,000 wealth tax payers [TCA, 1991 issue] spent 3.75 hours on average (2.5 hours taxpayer time; 1.45 hours unpaid help). A labour year numbers 1,700 hours. Average money costs are Gld 225 per taxpayer.

income. Households already receiving rent subsidy must apply again every year before the start of a new rent subsidy period (1 July). This also applies to tenants who receive rent subsidy through their landlord. Apart from applying for rent subsidy, changes in the relevant circumstances (rent, income) must be reported. This study looks at the compliance costs of applications only.

6.4.2 Costs per household

It took the average household half an hour to apply for rent subsidy. Only 14 per cent of households needed more than one hour (Table 6.15). The average household received ten minutes unpaid help; 64 per cent could do without assistance, the others received about half an hour on average. Money costs of rent subsidy applications were negligible; 98 per cent of households spent no more than Gld 10.

There is clearly a trade-off between time tenants spend and the unpaid help they receive. Households spending no time on rent subsidy applications receive significantly more help, while those who do not get help clearly need more time. Only 15 per cent of households report spending time of their own and receiving assistance as well.

Table 6.15 Time and money spent on rent subsidy application, 1991

Time (hours)	Household time		Unpaid help		Money costs (Gld)		
	n	%	n	%		n	%
0	266	38	417	64	0-10	649	98
0-0.5	238	34	167	26	10-20	7	1
0.5-1	106	15	52	8	20-30	1	0
1-2	55	8	12	2	30-40	1	0
2-3	18	3	0	0	40-50	2	0
3-4	12	2	1	0	50-75	1	0
4-5	1	0	0	0	75-100	1	0
5-6	2	0	0	0	100+	2	0
6+	8	1	0	0	Total	664	100
Total	706	100	649	100			

6.4.3 Costs and household profiles

Four household characteristics were selected for further analysis: age and education of the head of the household, household income, and amount of rent subsidy received. Only the first two were found to be systematically related to compliance costs. Household time spent on rent subsidy applications decreases with age (table 6.16) and increases with education, while unpaid help (from outside the household) increases with age and decreases with education. This again illustrates the trade-off between tenants' time and help mentioned earlier: households, of which the head is older, or lower educated, substitute help from others for their own time. No

connection could be established between compliance costs and income, or amount of subsidy received.

Table 6.16 Time and money spent on rent subsidy application, 1991; by age group

	Age group													
	16-24		25-34		35-44		45-54		55-64		65+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Household time (hours)														
0	10	−20	40	−28	35	30	20	31	31	38	130	+ 52	266	38
0-0.5	18	36	54	38	50	+43	25	38	34	42	57	− 23	238	34
0.5-1	13	+26	20	14	19	16	11	17	7	9	36	14	106	15
1-2	7	14	14	10	5	4	5	8	6	7	18	7	55	8
2+	2	4	16	+11	7	6	4	6	3	4	9	4	41	6
Total	50	100	144	100	116	100	65	100	81	100	250	100	706	100
Unpaid help (hours)														
0	38	+79	101	+78	75	70	37	61	44	57	122	− 54	417	64
0-0.5	6	−13	19	−15	24	22	19	31	23	30	76	+ 34	167	26
0.5+	4	8	10	8	8	7	5	8	10	13	28	12	65	10
Total	48	100	130	100	107	100	61	100	77	100	226	100	649	100

Percentages marked + or − differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Household time	60	20	99.99	0.15	-0.16	99.99	-0.23
Help	31	10	99.93	0.15	0.16	99.99	0.27

6.4.4 Total costs of rent subsidy applications

Total time spent on rent subsidy applications can be estimated at 670 thousand hours, or 390 labour years. Money costs amount to a few million guilders. Together, compliance costs are about Gld 40m, 2 per cent of total rent subsidy outlays.

6.5 Social security benefits

6.5.1 General

Social security programmes differ considerably in their application procedures and additional obligations for benefit recipients. Lack of space prevents us from discussing details here. An overview of the Dutch social security system is given in section 4.5.1.

Survey respondents, receiving benefit, were asked to estimate time and money spent in order to comply with the relevant regulations during the past six months. Individuals, receiving benefit for less than six months, incurred higher

time and money costs than those who had received benefit for at least six months. This implies that the costs of *applying* for benefit are not negligible. Unfortunately, however, 90 per cent of respondents had already received benefit for at least six months. This left us with an insufficient number of respondents applying for benefit in the observed period to separately analyse the costs of their applications. That is why we have concentrated on the costs of complying with regulations for individuals *already* on benefit.

6.5.2 Costs of receiving benefit

The analysis is restricted to respondents who had been receiving benefit for at least six months at the time of questioning.

The average recipient spends 2.3 hours per six months (table 6.17). Over half of all benefit recipients needed no more than half an hour (table 6.18). The difference between various programmes is considerable. Recipients of AWW (widows and orphans benefits) or AAW/WAO (disability insurance) benefits spend relatively little time. For four out of five AWW-recipients and for two out of three AAW/WAO recipients, time spent on compliance is negligible (less than a half hour per six months). ABW, IOAW and IOAZ (national assistance and related schemes) take up a middle position. RWW/BZ (unemployment assistance) and WW (unemployment insurance) beneficiaries need the most time; 16 per cent of WW-recipients reports needing even more than 10 hours.

Table 6.17 Compliance costs of social security benefits during six months, 1991 (respondents receiving benefit for at least six months)

	AWW		AAW/WAO		RWW/BZ		WW		ABW/IOAW/-Z		Total	
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
Recipient's time (hrs)	.7	84	1.7	343	3.6	136	4.1	73	2.1	115	2.3	751
Unpaid help (hrs)	.7	57	.8	249	.8	87	1.4	56	.7	73	.9	522
Money costs (Gld)	8.1	77	12.2	331	12.9	134	20.8	73	8.5	109	12.2	724

The average social security beneficiary receives help from family members or friends during fifty minutes per half year. Differences between programmes are not significant. Only 16 per cent of recipients claim help for more than half an hour per six months.

Money costs are generally negligible: in 80 per cent of all cases, they amount to no more than Gld 10. Differences between programmes are small, but statistically significant. AWW-beneficiaries incur relatively low money costs, while WW-recipients spend the most money on compliance.

Although RWW/BZ and ABW, IOAW and IOAZ are related schemes, time and money spent by recipients differ significantly. RWW/BZ-recipients spend both more time and more money on compliance activities.

Because the numbers of respondents receiving benefit under the various programmes are too small for meaningful analysis, the connection between compliance costs and socio-demographic profiles of recipients cannot be analysed.

Table 6.18 Time and money spent on social security benefit during six months, 1991 (respondents receiving benefit for at least six months)

	AWW		AAW/WAO		RWW/BZ		WW		ABW/IOAW/-Z		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Recipient's time (hours)												
0-0.5	69	+ 82	229	+ 67	40	— 29	22	— 30	45	— 39	405	54
0.5-1	9	11	37	11	12	9	15	+ 21	23	+ 20	96	13
1-2	1	— 1	27	8	19	+ 14	5	7	13	11	65	9
2-3	1	— 1	8	— 2	17	+ 13	4	5	15	+ 13	45	6
3-5	1	1	9	— 3	15	+ 11	7	10	8	7	40	5
5-10	2	2	12	— 3	19	+ 14	8	11	4	3	45	6
10+	1	— 1	21	6	14	10	12	+ 16	7	6	55	7
Total	84	100	343	100	136	100	73	100	115	100	751	100
Unpaid help (hours)												
0-0.5	52	91	211	85	69	79	44	79	63	86	439	84
0,5-2	2	4	22	9	11	13	7	13	5	7	47	9
2+	3	5	16	6	7	8	5	9	5	7	36	7
Total	57	100	249	100	87	100	56	100	73	100	522	100
Money costs (Gld)												
0-10	75	+ 97	277	84	91	— 68	47	— 64	94	86	584	81
10-20	0	— 0	17	— 5	16	+ 12	11	+ 15	8	7	52	7
20-40	0	— 0	10	— 3	22	+ 16	4	5	4	4	40	6
40+	2	3	27	8	5	4	11	+ 15	3	3	48	7
Total	77	100	331	100	134	100	73	100	109	100	724	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V
Recipient's time	161	24	99.99	0.23
Help	6	8	35	0.08
Money	79	12	99.99	0.19

6.5.3 Application not granted

In the six months previous to questioning, 63 respondents had vainly applied for some benefit. Table 6.19 shows that differences in time and money spent on applying for benefit in vain, and on receiving benefit for less than six months, are not statistically significant. This suggests that the best part of compliance costs during the first six months is related to the application procedure. Unfortunately, the number of respondents is too small to allow further analysis.

Table 6.19 Comparison of time and money spent on social security benefit, by respondents receiving benefit less than six months, and respondents who applied for benefit in vain, 1991

	Recipients		Applied in vain		Total	
	n	%	n	%	n	%
Claimant's time (hours)						
0-0.5	17	18	16	28	33	22
0.5-1	9	9	9	16	18	12
1-2	16	17	8	14	24	16
2-3	10	10	6	11	16	10
3-5	16	17	4	7	20	13
5-10	9	9	5	9	14	9
10+	19	20	9	16	28	18
Total	96	100	57	100	153	100
Unpaid help (hours)						
0-0.5	47 +	62	15 —	41	62	55
0.5-1	7	9	8	22	15	13
1-3	13	17	7	19	20	18
3+	9	12	7	19	16	14
Total	76	100	37	100	113	100
Money costs (Gld)						
0-10	62	67	38	72	100	68
10-30	15	16	9	17	24	16
30+	16	17	6	11	22	15
Total	93	100	53	100	146	100

Percentages marked + or — differ significantly from other categories (95 per cent confidence)

Statistics	Chi2	d.f.	sign.(%)	Cramer's V	Kendall's Tau	sign.(%)	Gamma
Claimant's time	6	6	58	0.20	-0.16	96	-0.20
Help	6	3	88	0.23	0.17	97	0.29
Money	1	2	37	0.08	-0.06	77	-0.13

6.5.4 Total costs of receiving benefit

Total time spent in 1991 (twelve months) is estimated at 6,300 labour years. Money costs involve only a few million guilders. Total compliance costs are in the order of 0.6bn guilders. Costs of benefit applications have not been included.

6.6 Total compliance costs to private households

Table 6.20 summarises compliance costs to private households[114]. Regulations concerning taxes and benefits scrutinised here, extract an estimated 22,000 labour years and Gld 500m per annum from the Dutch population. In money terms, total

[114] Money costs of social security programmes and rent subsidy have been neglected because of the small amounts involved.

compliance costs amount to Gld 2.6bn. This is 5.1 per cent of total money flows connected with the relevant tax-benefit programmes, or 0.5 per cent of GDP.

For the individual household, complying with the WW-programme causes the highest costs, followed by RWW/BZ. The obligation to file a wealth tax return and an income tax return takes up third and fourth position, respectively. Rent subsidy applications bring relatively low compliance costs.

Compliance costs related to PIT take up two-thirds of aggregate compliance costs of all programmes studied here: Gld 1.7bn. Wealth tax is a distant second, costing Gld 250m.

The cost ratio of personal income tax is at 32 per cent very high, because compliance costs are related to the revenue of income tax[115] only. If such costs were related to the joint revenue of both income tax and payroll taxes (national social insurance contributions and wage tax, which are withheld by employers), the cost ratio would amount to a mere 1.4 per cent[116].

The compliance costs of wealth tax are also high in relation to revenues: the cost ratio amounts to 17 per cent. The cost ratio of the various benefit programmes varies from less than 1 per cent (AWW) to 2-3 per cent (RWW/BZ). In absolute terms, disability benefits (AAW/WAO) cause most compliance costs: Gld 200m. This is a consequence of the great number of beneficiaries of these programmes; compliance costs amount to approximately 1 per cent of expenditures.

Table 6.20 Compliance costs of tax-benefit programmes to households

	Per individual or household				Total population					
	Own time (hours)	Unpaid help (hours)	Money costs (Gld)	Total costs (Gld)	Population(a) (1,000)	Labour years (1,000)	Money costs (Gld bn)	Total costs (Gld bn)	Revenue/ outlays(b) (Gld bn)	Cost ratio (%)
Income tax (c)	3.0	1.5	77	330	5,300	14.1	0.41	1.72	5.4	32
Wealth tax	2.3	1.5	225	430	586	1.3	0.13	0.25	1.5	17
Rent subsidy	0.5	0.2	0	40	960	0.4	0	0.04	1.8	2
AWW	1.5	1.3	0	160	189	0.3	0	0.03	4.3	0.5-1
AAW/WAO	3.4	1.7	0	280	807	2.4	0	0.23	22.1	1
RWW/BZ	7.3	1.6	0	490	329	1.7	0	0.16	6.4	2-3
WW	8.2	2.7	0	600	170	1.1	0	0.10	4.7	2
ABW/IOAW/-Z	4.3	1.5	0	320	230	0.8	0	0.07	4.7	2

(a) Tax returns (1991, relating to tax year 1990), rent subsidy recipients (1991/92) and social security benefit years (1991). Sources: TCA [1991 issue, p. 53], VROM [c, p. 19], SZW [b, 1992 issue].

(b) Revenue of income tax (including national social insurance contributions paid on assessment) and wealth tax (source: TCA [1991 issue, p. 50]); rent subsidy outlays in 1990-91 (source: VROM [c, p. 19]); social security outlays in 1991 (source: SZW [b, 1992 issue, p. 155 and 159]).

(c) Including national social insurance contributions.

[115] PIT revenue as published in TCA [1991 issue, p. 50] includes national social insurance contributions *paid on assessment* (together with PIT).

[116] Joint revenue of income tax, wage tax and national social income contributions in 1990 amounted to Gld 119bn [TCA, 1991 isssue, p. 50].

6.7 Comparisons with other research

As no earlier studies on the compliance costs of rent subsidy or social security programmes are known to the author, comparison with other research is limited to personal income tax and wealth tax only.

6.7.1 The Netherlands

Two earlier studies produced estimates of the compliance costs of personal income tax. In 1985, *Research voor Beleid*, a private research institute, conducted a survey of taxpayers for the Tax and Customs Administration [Rozendal 1985]. One question concerned the amount of time spent on the 1984 tax return: the average was 3.5 hours (n=761, response rate 60 per cent, population coverage 0.017 per cent).

In 1991 *NIPO*, a commercial polling organisation, was commissioned by the Tax Reform Commission ('Stevens') to study the filing of the 1990 income tax return [NIPO 1991]. The results are based on a computer survey of a panel of households (705 taxpayers, population coverage 0.014 per cent). According to this source, the average taxpayer devoted 2.5 hours to his return, and received 0.5 hours of unpaid help. Money costs amounted to Gld 44 on average. Figure 6.2 shows the frequency distributions of time and money spent according to the NIPO-survey and this study (based on AVO-household survey)[117]. The frequency distributions of taxpayers' time and money spent on income tax compliance show a quite similar pattern. The gap is rather large where unpaid help is concerned, however. Almost all of the difference is concentrated in the three lowest hour-categories.

The results with respect to taxpayers' time spent on filing the tax return are quite similar: 2.5 hours (NIPO), 3 hours (this study) and 3.5 hours (Research voor Beleid). Three hours seems to be a plausible estimate. The NIPO-estimates for unpaid help and money costs are lower than our findings: 0.5 hours and Gld 44 instead of 1.5 hours and Gld 77. No obvious explanation for these differences is apparent. It may be pointed out that the methodology of both studies has been different, and that the NIPO-results are based on a much smaller sample than our results (705 against 4,743).

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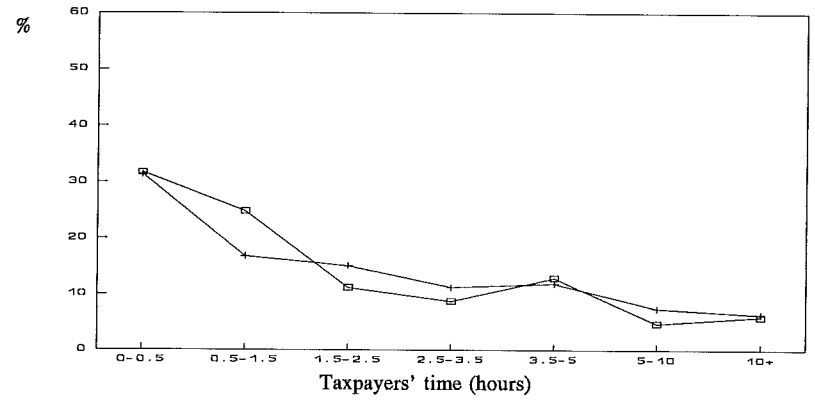
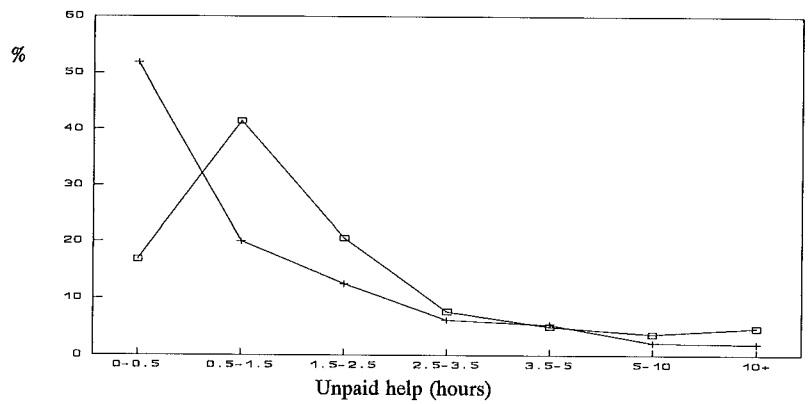
[117] The time categories used in both studies do not match exactly:

This study:	0-0.5	0.5-1.5	1.5-2.5	2.5-3.5	3.5-5	5-10	10+
NIPO:	0	1	2	3	4-5	6-9	10+

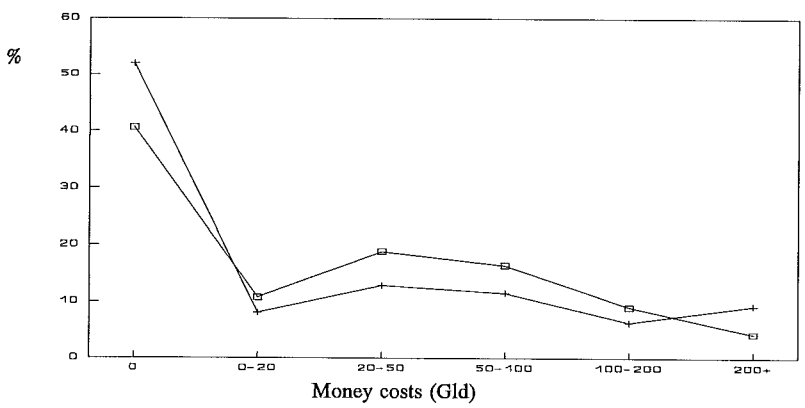
Figure 6.2 Comparison of this study and NIPO-survey: frequency distributions of time and money spent on personal income tax return 1990
(legend: □ NIPO-survey; + this study, based on AVO-household survey)



Taxpayers' time (hours)



Unpaid help (hours)



Money costs (Gld)

6.7.2 International comparisons

The results of eight recent foreign studies are available for an international comparison[118]. Amounts in foreign currencies have been converted into Guilders of the same year, using market exchange rates.

Wealth tax

Two foreign studies on personal wealth tax are known to the author. Sandford and Morrissey [1985] estimated the compliance costs of the Irish wealth tax which existed between 1975 and 1977. Based on file records concerning 142 clients of a large firm of accountants, professional fees were estimated at £252 (Gld 1,050) per year, 18.5 per cent of tax collected. Additional costs may have amounted to £100 (Gld 420) per taxpayer per year.

Tiebel [1986] conducted a face-to-face survey in order to study the compliance costs of several German taxes in 1984. He does not give the exact number of respondents and the response rate, though. Wealth tax compliance costs are estimated at 31 hours and DM 547 (Gld 620). Unfortunately, Tiebel has not calculated totals for the entire country, nor does he present cost ratios.

Compared with these results, compliance costs of the Dutch wealth tax (average 3.8 hours and Gld 225; cost ratio 17 per cent) seem to be relatively low. However, the samples of both foreign studies are rather small, and the methodology is different from that followed here, so no final conclusions can be drawn.

Personal income tax

Table 6.21 summarises the results of a number of foreign studies on PIT compliance costs, published since 1980. These studies are all based on (substantially) smaller samples than the present study. Response rates and population coverage are generally lower as well.

Slemrod and Sorum [1984a, 1984b] studied the compliance costs of the personal income tax 1982 (federal, state and local) in Minnesota. The findings are based on a mail survey which yielded six hundred usable replies. The average taxpayer spent 26.7 hours and $61 (Gld 160) on his tax return. Weighting to better represent the national population of taxpayers in the USA results in an average of 21.7 hours and $44 (Gld 120). Total costs are estimated at between 1.4bn and 2.1bn hours. Converting hours into dollars (using the respondent's own value of his time) brings total costs (time and money) up to $17-27bn (Gld 45-72bn), which places the cost ratio between 5 and 7 per cent.

Tiebel's [1986] study, referred to above, also included PIT. All tax work (not just filing the return) associated with personal income tax is estimated to take up sixteen hours and DM 338 (Gld 380). Again, no cost ratio is given, nor is an estimate of total PIT compliance costs.

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[118] The reader is once again reminded of the pitfalls related to international comparisons of compliance costs, which are discussed in section 5.7.

Table 6.21 International comparison of PIT compliance cost studies

Reference	Year and country	Usable response	Response rate (%)	Population coverage (%)	Av. time spent (hours)	Average money costs	Cost ratio (%)
Slemrod and Sorum [1984a,b]	1982 USA	600	30	0.03 (a)	22	$44	5-7
Tiebel [1986]	1984 W-Germany	764 (b)	.	0.008 (c)	16	DM338	.
Arthur D. Little [1988]	1983 USA	3,831	62	0.004	20-32	.	.
Sandford et al. [1989]	1983/84 UK	1,776	43	0.007	3.6	£25	3.6
Vaillancourt [1989]	1985 Canada	1,673	.	0.01	5.5	$32	2.5
Pope et al. [1990]	1986/87 Australia	1,098	16	0.01	11	$144	8-11
Blumenthal and Slemrod [1992]	1989 USA	708	43	.	27	$66	.
This study	1990 Netherlands	4,743	44	0.09	4.5	Gld77	32 (d)

(a) Response as percentage of total number of *Minnesota* taxpayers.
(b) Number of respondents: 1,933, including non-taxpayers. According to Tiebel [1986, p. 119], 39.5% of the population are PIT-payers and 5.8% are WT-payers.
(c) Number of responding households divided by total of 25m in W-Germany [Tiebel 1986, p. 205].
(d) Cost ratio based on PIT revenue only; with withholding taxes included, the cost ratio would fall to 1.4 per cent.

The Internal Revenue Service commissioned Arthur D. Little to study the time taken up by filing returns for the federal personal income tax in the USA [Arthur D. Little 1988]. Two research methods were used: a mail survey and a diary study. For the diary study, a number of taxpayers were asked to keep record of the time needed to file their tax return. The results were disappointing. It seems that a lot of respondents wrote down the time *after* they had completed their tax return, instead of actually keeping a log. Based on the mail survey, average time spent in 1983 was between twenty and thirty-two hours per return. In the entire country, an estimated 1,594m hours may have been spent. No cost ratio is given.

Sandford et al. [1989] report results of a postal survey into the compliance costs of personal income tax and capital gains tax (CGT) in the UK in 1983/84. Like in the Netherlands, most of the tax is deducted at source, but in the UK the majority of employees with simple tax affairs only receive a tax return about once every five years. The average taxpayer devoted 3.5-3.75 hours on income tax and CGT. The total number of hours spent was about 90m. Using the taxpayers' own

valuation of their time, the value of this time was estimated at £532m (Gld 2.3bn). Money costs amounted to £617m (Gld 2.7bn), which brings total costs at £1,159m (Gld 5bn), or 3.6 per cent of revenue.

Vaillancourt [1989] studied the compliance costs of the personal income tax return 1985 in Canada, by means of an omnibus face-to-face survey. His estimate is 5.5 hours and $32 (Gld 80) per taxpayer. Using wage rates to convert time into money, total costs are estimated at $1.95bn per year (Gld 4.7bn), or 2.5 per cent of revenue.

Pope et al. [1990] studied the Australian personal income tax 1986/87. Based on the results of a postal survey, their estimate for the average taxpayer is eight hours, plus three hours of unpaid help. Money costs amounted to $144 (Gld 210) on average. Using the taxpayers' own valuation of their time, total costs are estimated at between $2.8 and $3.8bn (Gld 4-6bn), or 8-11 per cent of tax collected.

Finally, Blumenthal and Slemrod [1992] repeated the study of Slemrod and Sorum [1984a, b] in order to establish whether the (federal) Tax Reform Act 1986 had actually simplified the tax system. Using data obtained through a postal survey of 708 taxpayers from Minnesota, they conclude that the compliance costs of personal income tax (federal, state and local) have grown from 22 hours and $45 to 27 hours and $66 (1989 dollars). The results are weighted to represent the population of the entire USA. Both estimates are within the range found by Arthur D, Little [1988] for time spent on *federal* PIT. However, the authors acknowledge that their samples are small and not representative. Moreover, the Minnesota State income tax has been simplified considerably between 1982 and 1989, which severely limits the applicability of the survey data used to the USA at large.

Summarising, it would seem that compliance costs of personal income tax (and wealth tax) in the Netherlands compare favourably to those abroad. In the UK and Canada, PIT compliance costs are at a comparable level. In these countries, average taxpayers spend 3.5-5.5 hours and Gld 75-125. Australian PIT payers face costs about twice as high, and in Germany compliance costs seem to be even higher. Taxpayers in the USA are worst off: on average they devote between twenty and thirty hours on PIT. This may in part be explained by differences in national tax systems (e.g. assessment procedure, existence of wage tax). The Dutch cost ratio is rather high (32 per cent), because compliance costs of PIT are related to PIT revenues only, while the lion's share of revenue is withheld by employers. When the combined revenue of PIT, wage tax and general social insurance contributions would be used, the cost ratio would drop to a mere 1.4 per cent.

Part 3

Summary and conclusions

7

Total operating costs

In this chapter, we combine results from Chapters 4 through 6 to arrive at total administrative and compliance costs of all tax-benefit programmes included in this study. Then, we discuss briefly the costs not included in this total. Finally, we look into the distribution of total operating costs.

7.1 Summary of operating costs

In Chapters 4 through 6, we estimated administrative costs and compliance costs to firms and households, respectively. The results reported in these chapters are combined in table 7.1. As already explained, the figures apply to different years, as close as possible to 1990[119]. Costs *not* included in the study are indicated by exclamation marks (!) if they are expected to be significant, and by question marks (?) if they might probably be ignored. When considering the table, bear in mind that all cost figures included are *estimates*, not exact numbers.

Table 7.1 consists of two parts: the upper part applies to taxes and levies, whereas the lower part relates to subsidies and benefits. Social insurance contributions are included in the upper part of the table, because they may be considered as taxes (section 1.3.1). Thus, the costs of administering benefits under different programmes may be compared more easily, as they are separated from collection costs, which do not exist in programmes financed out of general revenue. The costs of levying social insurance contributions are combined with those of personal income tax and wage tax, because these levies are largely jointly collected; the attribution of operating costs would be rather arbitrary[120].

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[119] Numbers have not been converted into 1990 guilders, because inflation was low; such corrections would be negligible compared to the error margins already associated with our estimates. Moreover, programmes change continually, and so do the numbers of affected parties (taxpayers, recipients). Any estimate can therefore only indicate a cost level at a given moment in time. For that reason, and in order to avoid confusion, the estimates in table 7.1 apply to the same years as the estimates included in the preceding chapters.

[120] The joint estimates of administrative and compliance costs of PIT, wage tax and social insurance contributions, include costs related to the AWBZ-programme, because compliance costs of AWBZ can not be separated - there is a single levy which includes AWBZ-contributions. Formally, AWBZ (a general social insurance programme which covers certain medical expenses) is outside the scope of our study, because this programme offers benefits in kind. AWBZ-*contributions* may be considered as taxes, however (section 1.4.1). Therefore, no efforts have been made to exclude AWBZ-collection costs artificially. Because *compliance* costs of AWBZ-contributions are included, *administrative* costs had to be included as well. This explains why total administrative costs in table 7.1 slightly exceed total administrative costs in table 4.32, which excludes AWBZ.

Table 7.1 Operating costs of all tax-benefit programmes included in this study, around 1990 (Gld m)

	Revenues/ outlays	Adminis- trative costs	Compliance costs business	Compliance costs households	Operating costs (total)	Cost ratio (%)
A. Taxes and levies	(Revenues)					
Radio and TV licence fees	840	34	?	?	34	4.0
Environmental levies WABM	570	40	!	-	40	7.1
Import duties	2,700	250	220	-	470	17.6
Value added tax	38,000	250	2,100	-	2,300	6.2
Special tax on automobiles and motorcycles	2,600	6	?	-	6	0.2
Excise duties	9,700	82	70	-	150	1.5
Transfer tax	1,700	11	?	-	11	0.7
Tax on motor vehicles	3,700	88	?	?	88	2.4
PIT, wage tax, contributions (a)	130,000	1,200	3,700	1,200	6,100	4.8
Dividend tax	2,300	12	30	-	43	1.9
Corporation income tax	17,000	210	670	-	890	5.1
Wealth tax	1,200	70	-	250	320	26.4
Succession duty	1,200	25	-	!	25	2.2
Property tax	3,100	70	60	?	130	4.3
Total taxes and levies	210,000	2,300	7,000	1,500	11,000	5.1
Share of total costs (%)		*22*	*65*	*14*	*100*	
B. Subsidies and benefits	(Outlays)					
IPR (regional investment projects)	280	4	!	-	4	1.5
INSTIR (innovation)	100	4	!	-	4	3.8
PBTS (technology)	100	8	!	-	8	7.8
IPZ (maritime shipping)	110	0.4	!	-	0.4	0.4
Study grants (WSF)	4,100	80	-	!	80	1.9
Study-costs compensation (TS)	450	19	-	!	19	4.2
Rent subsidy (IHS)	1,800	110	-	37	150	8.2
Disability insurance (AAW/WAO)	18,000	950	-	230	1,200	6.7
Sickness benefits (ZW)	9,500	700	-	?	700	7.4
Unemployment insurance (WW)	3,700	480	-	100	580	15.7
Supplementary benefits (TW)	450	63	-	?	63	13.8
Old age pensions (AOW)	29,000	180	-	!	180	0.6
Widows and orphans ben. (AWW)	4,300	35	-	30	64	1.5
Family allowances (AKW)	6,100	150	-	?	150	2.4
Nat. assistance (ABW/IOAW/-Z)	11,000	1,100	-	230	1,300	11.6
Total subsidies and benefits	89,000	3,800	!	630	4,500	5.0
Share of total costs (%)		*86*		*14*	*100*	
C. Mandatory information supply			160		160	
Overall (A+B+C)	**300,000**	**6,200**	**7,000**	**2,100**	**15,300**	**5.1**
Share of total costs (%)		*40*	*46*	*14*	*100*	

Note: unknown costs are included as ! if they are probably significant, and as ? if they are thought to be relatively low. Underlined totals or ratios exclude unknown costs marked as !, and thus are underestimates.

(a) National social insurance contributions (AAW, AOW, AWW, AWBZ) and employees' social insurance contributions (WAO, ZW, WW).

Sources: see previous chapters.

Compliance costs of PIT are divided between firms and households. The figure for firms is derived from the business survey; the figure for households comes from the household survey, after elimination of the self-employed, so as to avoid double counting (see section 6.2.6). Compliance costs arising from the obligation for firms to inform the tax and social insurance authorities about third parties (e.g. concerning interest paid out by banks) could not be assigned to particular programmes, thus they are listed separately.

In 1990, the operating costs of all tax-benefit programmes considered here amounted to approximately Gld 15bn, or 5.1 per cent of the aggregate amount of revenues and outlays related to these programmes.

7.2 Excluded costs and survey bias

7.2.1 Compliance costs not included

Although the administrative costs of all programmes under study are quantified, the compliance costs of a number of tax-benefit programmes remain unknown. Some of these costs may safely be ignored because of their quantitative insignificance, but others may be substantial. In order to distinguish between significant and ignorable costs, the first are indicated by exclamation marks, whereas the latter are depicted by question marks. Of course, this distinction is somewhat arbitrary and for presentation purposes only. Here, we give a brief description of the probable order of magnitude of omitted costs, as far as possible given the limited data available.

Taxes and levies
Most of the excluded compliance costs in the tax section of table 7.1 are of minor importance. Once registered (easily done by filling in a form available at each post office), *radio and TV licence fees* have to be paid twice a year, automatically or by pre-printed bank credit slips. The programme is straightforward and easy to understand. Compliance costs should be very low. Compliance costs of environmental levies to business are estimated at Gld 100m (section 4.2.2), but this estimate includes several local rates. The compliance costs of *WABM* make up for an unknown proportion of this total amount.

Special tax on automobiles and motorcycles (a percentage of the list price of the vehicle, VAT not included, payable at the time of purchase) is collected by the car dealer, in a way very similar to VAT, except that prepaid tax may not be deducted. Because of the similarity with VAT, the (extra) compliance costs of this tax will be modest. *Transfer tax* (6 per cent of the value of acquired real estate) is levied from the buyer, but collected and passed on to the tax authorities by the notary public before whom the deed is passed. Because of the relative straightforwardness of the tax, compliance costs may be assumed to be moderate. *Tax on motor vehicles* is due by the owner, who pays annually by a pre-printed bank credit slip. Registration (at the post office, after purchase of the car) is uncomplicated.

Wage tax causes employees to incur compliance costs, because a form must be filled in when taking a job *(loonbelastingverklaring)*, or when the personal situation of the taxpayer changes in such a way as to change the amount of wage tax to be withheld (e.g. the purchase of a house - interest payments are deductible - or a change in the domestic situation which has consequences for personal allowances). As this does not happen too frequently as a rule, the costs to employees will be limited. Most people will probably associate these obligations with personal income tax anyway.

A cost which may not be negligible relates to *succession duties*. Beneficiaries through inheritance must pay a percentage of the market value; rates depend on this value and the relationship with the deceased. The valuation of acquisitions may prove especially troublesome in some cases and may cause high compliance costs.

Finally, *property tax* (an annual tax based on the value of real estate), may generate substantial compliance costs to households if the value of the property is disputed. In the majority of cases, the amount due is paid annually, simply by signing and mailing a pre-printed bank credit slip.

Given these observations, the total amount of Gld 11bn of operating costs of taxes and levies should perhaps be raised by a few Gld 100m, so as to include all compliance costs.

Subsidies and benefits

The compliance costs of the subsidy programmes *IPR, INSTIR, PBTS and IPZ* are covered by the business survey. Unfortunately, however, the number of respondents who had applied for these subsidies was too low to allow for further analysis in the case of IPR (n=12), PBTS (n=13) and IPZ (n=0) (see section 5.3.2). Moreover, in the case of IPR, the total number of applications is not known, because of the decentralised administration of this programme; this hampers estimates of total compliance costs. INSTIR is the only programme where the number of respondents is satisfactory (n=81), and where the total number of subsidy applications is known. For reasons already indicated in section 5.3.2, however, the accuracy of data supplied by survey respondents is rather doubtful when it comes to subsidy programmes. That is why we have refrained from using these data to estimate total compliance costs. Although the costs of applying for subsidy may be considerable for individual firms, it is rather improbable that they have a significant impact on overall operating costs.

The compliance costs of *study grants and study-costs compensation (WSF and TS)* are excluded from this study, because, for practical reasons, they could not be included in our household survey. There is some reason to believe that WSF, in particular, causes considerable compliance costs. Administration was chaotic for a couple of years, which resulted in a high error level[121]. Moreover, customer service has only recently been discovered as being a desirable activity by IB, the agency administering both programmes. Thus, students who felt that they had not

[121] The National Audit Office refers to 'a serious administrative crisis'. See Algemene Rekenkamer [1990, pp. 23-35].

received what they were due, could only complain by filling in one of several standard forms; letters were not accepted by IB. Waiting queues of visitors were long and contact by telephone was virtually impossible. Because of the high level of uncertainty thus generated, psychological costs must have been especially high. There is evidence, however, that this situation has improved substantially in recent years. Because of the high number of recipients of study grants (1990: 550,000), compliance costs would already exceed administrative costs (Gld 80m) if they were put as low as Gld 150 per student, which seems quite modest indeed[122].

The compliance costs of four social security programmes to recipients are not included, because the programmes concerned were not covered by the (omnibus) household survey which we used. But costs to recipients are generally low. *Sickness benefits* (ZW) are paid out automatically when the insured has reported ill; no separate application is necessary. *Supplementary benefits* (TW) are applied for together with the benefit TW supplements; additional work will be negligible. *Old age pensions* (AOW) are rather similar to AWW-pensions. Costs per recipient are low, but because of the large number of AOW-recipients (approximately two million), total costs of receiving AOW may amount to several hundred million guilders. *Family allowance* (AKW) is applied for after the birth of a child; after that, relevant changes must be reported, nothing more.

Thus, total operating costs of subsidies and benefits for firms and private households may well be underestimated by several Gld 100m. In conclusion, it is not very likely that compliance costs excluded in table 7.1 constitute more than a few per cent of total operating costs as quantified.

7.2.2 Cost components left out

The impossibility of estimating operating costs according to a uniform definition has already been stated several times. Therefore, different cost components have been taken into account, depending on the programme under consideration. It is not very useful to summarise all such differences here; in the preceding chapters, calculation procedures are specified in great detail.

An important cost component which is left out of the analysis *in every case* consists of the *psychological costs* related to the tax-benefit system. Such costs could not be measured (see section 3.3.4). Thus, the figures in table 7.1 underestimate 'true' costs. On the other hand, possible benefits of compliance (e.g. managerial benefits of improved record-keeping, see section 2.2.4) or administration (e.g. use of tax data in statistics), are ignored as well, and for the same reason (immeasurability).

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[122] Average compliance costs of social security benefits range from Gld 160 to Gld 600 annually (see section 6.5).

7.2.3 Survey bias

The compliance cost data in table 7.1 are based on survey research. As is pointed out in Chapter 5, there is reason to believe that our business survey was biased by substantial non-response from firms incurring relatively high compliance costs. Firms which considered themselves relatively heavily burdened were under-represented in the sample, while those firms in the sample which claimed to be heavily burdened actually did incur relatively high compliance costs. Thus, results presented in this study probably *under*estimate the true level of business compliance costs, and perhaps by as much as 10 per cent (section 5.3.1). A second cause for underestimation of the true cost level results from the exclusion of agriculture from the business survey. No evidence was found that the household survey might be biased in any way.

7.2.4 Programmes excluded

Finally, one should keep in mind that only part of the total Dutch tax-benefit system is the subject of this study (see Chapter 1). Programmes of a smaller size than those included may be expected to be relatively expensive because of their small scale, resulting in higher cost ratios.

7.2.5 Conclusion: overall operating costs

Considering the exclusions and survey bias discussed above, total operating costs as given in table 7.1, Gld 15.3bn, may safely be considered to constitute a rather conservative estimate. In order to indicate roughly how wide the gap with true costs might be, table 7.2 provides a tentative calculation, using the best available knowledge.

First, excluded compliance costs probably amount to several hundred million guilders. Next, the non-response bias in the business survey may have resulted in an underestimation of business compliance costs by 10 per cent, or Gld 700m. Thus, true costs of tax-benefit programmes included in our study may be as high as 16-17 billion guilders per year. If we were to include both the agricultural sector and the programmes which remain outside the scope of this study, total operating costs might approach Gld 20bn; 4 per cent of GDP. Both psychological costs and benefits from compliance and administration are still neglected here, because it is difficult to see how these might be quantified.

Of course, table 7.2 offers no more than a very rough indication of the probable order of magnitude of total operating costs of the Dutch welfare state. More research is clearly needed. For the moment, it is clear that the operating costs of the Dutch tax-benefit system amount to at least Gld 15bn annually, and thus are certainly not to be neglected. Before turning towards the policy implications of our findings in the next chapter, the distribution of operating costs must be considered.

Table 7.2 Possible effect of exclusions and survey bias on total operating costs estimate (Gld m)

Total from table 7.1	15,300
Excluded compliance costs	several 100s
Non-response bias	700
Total (for included programmes and economic sectors)	16,000-17,000
Excluded programmes, agriculture	several 1,000s
Total Dutch tax-benefit system	possibly 20,000
Psychological costs	*not measurable*
Benefits from compliance and administration	*not measurable*

Sources: see text.

7.3 Distribution of operating costs

7.3.1 Distribution by programme

Taxes and levies

Taxes and levies account for over 70 per cent of total operating costs: Gld 11bn, or 5.1 per cent of revenues. Over three quarters of the operating costs of taxes and levies are borne by the private sector; only 22 per cent consists of administrative costs. The most expensive tax to operate (and indeed the most expensive of all tax-benefit programmes) is the joint PIT/payroll tax. Its operating costs amount to Gld 6.1bn, equal to 4.8 per cent of revenue. The second most costly tax is value added tax, which costs Gld 2.3bn annually, 6.2 per cent of revenue. Of these costs, 90 per cent is incurred by private business. Another rather costly tax is corporation income tax, which comes at Gld 890m. Two levies show particularly high cost ratios: import duties (18 per cent) and wealth tax (26 per cent). The cost ratios of remaining programmes stay below 10 per cent.

The level of operating costs ranges from Gld 6m (special tax on automobiles and motorcycles) to Gld 6.1bn (PIT/Payroll). The cost ratio varies considerably too: from as low as 0.2 per cent (special tax on automobiles and motorcycles) to 26 per cent (wealth tax). In section 4.4.3, it was hypothesised that variation in *administrative costs* may be explained by differences in type of tax. We divided taxes into groups according to two criteria: assessment of tax due, and collection. In the first case, transaction-based taxes and valuation-based taxes are distinguished. Transaction-based taxes, linked to market transactions, were found to be rather cheap to administer, while valuation-based taxes (based on the value of e.g. assets or property) were relatively expensive. Table 7.1 confirms that the same holds true when *compliance costs* are included in the analysis. Generally speaking, the cost ratio of transaction-based taxes is lower than the cost ratio of valuation-based taxes[123].

[123] Of the valuation-based taxes in table 7.1, the cost ratio ranges from 2.2 per cent to 26 per cent, while the cost ratio of transaction-based taxes lies between 0.2 and 6.2 per cent. The

Another property of taxes that may influence their costs is the technique used to collect them. A number of taxes are collected from third parties instead of directly from intended taxpayers (e.g. withholding taxes, VAT). Thus, part of administrative costs is shifted to the private sector, which results in rather low administrative costs. This may be justified if such shifting of responsibilities substantially reduces (total) operating costs[124]. Table 7.1 suggests that this may indeed be the case. The cost ratio of taxes paid or collected by third parties is in fact relatively low. The high cost ratio of import duties (18 per cent) is an exception, because it includes the costs of border traffic control. However, at 6.2 per cent, VAT is also rather costly.

Subsidies and benefits

About 30 per cent of total operating costs is related to subsidy and social security programmes. Interestingly, the joint cost ratio of subsidies and benefits, 5.0 per cent, almost equals that of taxes and levies (5.1 per cent). Costs per programme differ considerably. National assistance and the disability insurances AAW/WAO beat the lot with joint operating costs amounting to Gld 1.3bn and 1.2bn annually, respectively. The cost ratio ranges from 0.4 per cent (IPZ) to 15.7 per cent (unemployment insurance WW).

As far as benefit programmes are concerned, such wide variation can, in part, be explained by the varying complexity of establishing qualification and benefit level, and differences in average benefit duration. Demographic programmes (AOW, AWW and AKW) are relatively cheap to administer and to comply with: operating costs amount to 0.6-2.4 per cent of outlays. Qualification for benefit is relatively easy to establish, and the amount of benefit does not depend on previous earnings and thus is easily determined. Moreover, benefit duration is usually long, resulting in a relatively low caseload flow. Benefits from employee's insurances AAW/WAO, ZW and WW depend on previous earnings, which implies more complex calculations and verification procedures. Moreover, costs of disability programmes AAW/WAO are boosted by the relatively high costs of medical examinations. ZW and WW are characterised by relatively short-term benefits, resulting in a high cost ratio. The high costs of supplementary benefits (TW) may only partly be explained by the relatively small benefit amounts; the rather arbitrary attribution of joint costs to this programme possibly plays a part too. The administration of national assistance (ABW) is relatively expensive because this programme is fully means-tested, as well as being rather complicated.

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comparison is distorted by the fact that the compliance costs of succession duties and property tax are not included, however. Omitting these taxes, the cost ratio of valuation-based taxes ranges from 5.1 per cent (corporation tax) to 26 per cent. Actually, the comparison is still clouded by the fact that one-sixth of corporation tax receipts results from natural gas revenues, which keeps down operating costs (see section 4.4.3).

[124] Although the use of third parties for tax collection may reduce operating costs, such an approach will simultaneously reduce the visibility of the tax burden. According to the *fiscal illusion* hypothesis, this can result in a higher tax level than people prefer [Mueller 1989, pp. 342-343]. This, in turn, may increase the *in*direct costs of taxation (excess burdens; section 1.1.2).

7.3.2 Incidence

Approximately 40 per cent of total operating costs consists of administrative costs; compliance costs to business account for 46 per cent, and compliance costs to private households for 14 per cent of overall costs. Because some compliance costs are excluded from this total, while no administrative costs are left out, the share of administrative costs in total costs is probably overestimated by several percentage points, though.

Thus, the private sector accounts for approximately 60 per cent of total operating costs, or Gld 9.1bn annually. Part of the compliance costs to business, however, is borne by the public sector, because of the deductibility of certain costs from taxable profit, and due to cash flow benefits several programmes generate for firms. In section 5.6.3, we estimated that roughly Gld 2.2bn of business compliance costs are in fact borne by the public treasury. This leaves a net burden of Gld 6.9bn directly on the private sector. Thus, 55 per cent of total operating costs, or Gld 8.4bn, is financed through the public sector. Of course, these public sector costs are eventually financed by the private sector as well, through taxes and social insurance contributions.

8

Conclusions and policy implications

In this chapter we start by reviewing some important conclusions of our study. Then we discuss some policy options concerning operating costs. Is there a cost saving potential in legislation or administration? Or should present cost levels be accepted and possible detrimental effects on the national economy be minimised by other means?

8.1 Conclusions

Overall costs are quite substantial

This study is the first of its kind to attempt to estimate the total costs of operating a tax-benefit system. The Netherlands have been selected as a case study. All in all, thirty (clusters of) tax-benefit programmes have been analysed. Data on administrative costs are derived from official documents, supplemented with directly acquired information from administrative agencies. Data on compliance costs were collected by way of two representative nation-wide surveys, among firms (n=1,053) and individuals (n=10,992), respectively. Total operating costs that could be quantified amount to Gld 15.3bn in 1990, or 3.0 per cent of GDP. Inclusion of compliance costs that could not be quantified could raise the cost level to Gld 16-17bn. Total annual costs of the Dutch tax-benefit system, including programmes left out of this study, might well amount to Gld 20bn. Thus, the tax-benefit industry is of considerable importance. Its size may be compared to that of the wood, furniture and building materials industry; production in this industry amounted to Gld 16bn in 1990[125]. Comparable data from other countries are scarce. Sandford et al. [1989, p. 191] estimate the operating costs of the UK tax system at 1.5 per cent of GDP, somewhat below the level found for the Netherlands[126]. Business compliance cost ratios in the Netherlands are at levels comparable to those abroad. The compliance costs of the Dutch personal income tax seem to compare favourably to those in other countries.

Operating costs of programmes differ greatly

Only four (clusters of) programmes, VAT, PIT/payroll taxes, disability insurances (AAW/WAO) and national assistance (ABW/IOAW/IOAZ), generate over 70 per cent of total operating costs of the thirty (clusters of) programmes analysed here.

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[125] CBS [a, 1992 issue, p. 102].

[126] Operating costs of taxes and levies in the Netherlands amounted to Gld 11bn in 1990 (table 7.1), 2.1 per cent of GDP. However, this estimate includes costs related to employees' social insurance contributions, while Sandford et al. include only national insurance contributions. The corresponding percentage for the Netherlands would be about 1.9 per cent.

Expressed as a percentage of revenue or outlays, operating costs vary between 0.2 per cent and 26 per cent. Wealth tax, import duties, unemployment benefits, supplementary benefits and national assistance all have cost ratios exceeding 10 per cent. Taxes that are relatively cheap to operate are mostly transaction based and collected by third parties. Relatively inexpensive social security programmes are those with long benefit duration and easy to establish claims (e.g. dependent on demographic variables such as age) and benefit level (e.g. linked to minimum wage).

Most operating costs are incurred by the private sector
60 per cent of total operating costs, Gld 9bn, consist of compliance costs. Households incur compliance costs of about two billion guilders, of which over 50 per cent is related to personal income tax. Business compliance costs amount to at least Gld 7bn annually[127]. Almost one-third of this amount is borne by the public treasury, because of cash flow benefits generated by some programmes, and because of the deductibility of certain compliance costs from taxable profit. Thus, net compliance costs to business amount to approximately Gld 5bn. Of course, eventually, *all* operating costs are financed by the private sector, because public sector costs are ultimately financed by taxes and social insurance contributions.

Compliance costs show great variation between firms and households
Apart from the sheer magnitude of compliance costs, an important result emerging from this study is the fact that such costs differ greatly between firms and households. By far the largest proportion of compliance costs incurred by households is related to personal income tax (including national social insurance contributions). Taxpayers with complicated tax affairs incur compliance costs much above average. Compliance costs are especially high for the self-employed. Significant differences in the level of business compliance costs were found as well, even for firms in the same size class and in the same economic sector. We found that variation in compliance costs is greater for small firms than for large ones. The considerable variation between firms implies that a compliance cost study must be based on data from a great number of firms, especially if small or medium-sized business is studied. This result severely limits the usefulness of time-consuming case studies. The survey technique, as used in this study, seems to be the most appropriate and fruitful approach.

The impact of business compliance costs is very regressive
Although the variation of compliance costs over firms is substantial, even for firms of comparable size and economic activity, there is a strong tendency towards a negative relationship between firm size and relative cost level. Costs per employee decrease markedly with firm size, measured by turnover or in terms of employment. In other words, there are considerable economies of scale, as could be expected on theoretical grounds. The regressive impact of compliance costs is

[127] Due to non-response, this estimate is probably biased downward by perhaps as much as 10 per cent (section 5.3.1).

an element stressed in many foreign cost studies. In fact, no study is known to the author which contradicts this result. This conclusion is highly important, since it follows that government, by means of the existing tax-benefit system, encourages economic concentration. Larger firms are given a competitive advantage over small firms. This distorts the market structure and thus leads to efficiency losses. Compliance costs differ between industries as well, but this variation must for a large part be attributed to size differences. Only the trade sector shows a systematically higher cost level.

8.2 Policy implications: introduction

The aim of this study was to quantify the level and distribution of the operating costs of the Dutch tax-benefit system. Now that such costs are quantified, it is difficult to refrain from formulating some policy recommendations. In doing so, we acknowledge that cost is only one consideration in the policy-making process. In fact, *any* one of the following suggestions has certain drawbacks of itself. Obviously, it is not the ultimate goal of a tax-benefit programme to minimise its operating costs. That goal would most easily be accomplished by simply abolishing the programme in question. Nevertheless, trading-off programme costs against benefits strived for is the job of the politician. Here, we discuss the matter from the operating costs point of view.

To give all related aspects the full treatment would need another book. Clearly, many recommendations have been made before by other authors[128]. The aim here is to offer a number of general observations regarding the Dutch tax-benefit system, not to lay down detailed policy proposals. A number of the policy measures discussed below are already being implemented in the Netherlands (see also Chapter 1).

In the remainder of this chapter, we consider two options. First, the *level* of operating costs might conceivably be reduced, thus freeing real resources for alternative uses and reducing detrimental impacts on the economy. Second, the *distribution* of operating costs might be improved, reducing present economic distortions (and unfairness) at a given level of operating costs.

8.3 Reducing the level of operating costs

Cost reductions may be sought through adjustment of the *structure* of tax-benefit programmes, or by way of improving the *administration* of such programmes.

[128] With respect to taxation, the final chapter of Sandford et al. [1989] is of special interest.

8.3.1 Structure of tax-benefit programmes

Costs of legislation

Complaints that the tax-benefit system is too complicated are hardly original. Such criticism extends to most legislation. The annual report of the official Dutch Commission on the Assessment of Legislative Projects states that 'the flood of and lust for legislation seems unstoppable' [Kortmann Commission 1992, p. 3]. Similar comments are made elsewhere [e.g. Täuber 1984, Hunkeler 1985]. It seems that new legislation is introduced at an ever increasing pace, and that this growth is self-reinforcing[129]. The results of rush work in Parliament must repeatedly be repaired by even more legislative patchwork. Politicians seem to have an interest in the cloudiness of new legislation. In addition, a desire for perfectionism results in a confusion of detailed rules, instead of clear guidelines. Compromises and party politics succeed in complicating originally straightforward proposals. Moreover, introducing new legislation is more rewarding electorally than abolishing old legislation which has outlived its usefulness. Thus, a process of legislative inflation seems continually to proceed.

On the other hand, not all programme complexity may stem from imperfections of the legislative process. Actually, it is the old story of trading-off equity and efficiency. Many complexities originate from the desire to take into account justified needs of special groups, or because policy makers want to exclude certain groups from programmes they don't really need. Thus, simple programmes are often too broad to be fair, while legislation which maximises equity is too complex to be implemented efficiently [Floehr and Tiepelmann 1985, p. 484].

In order to prevent unjustified complexity in legislation, which would give rise to high operating costs, several remedies are suggested in the literature. Thus, it is argued that the consequences of new legislation should be carefully studied in advance [e.g. Dicke and Hartung 1986, p. 5-6]. If expected operating costs are deemed too high, then the proposed legislative changes should not be enacted. In several countries, such a condition already exists, although assessment of proposed legislation is mostly qualitative rather than quantitative in nature[130]. This is also the case in the Netherlands, where the Government Accounts Act and the legislation test (*wetgevingstoets*, which includes the so-called *bedrijfseffectentoets*) require an assessment of administrative and compliance costs before legislative changes (see section 1.2.4). Unfortunately, such assessments are still lacking or incomplete in many cases.

A related proposal suggests testing new legislation before its introduction [Dicke and Hartung 1986, p. 73-81]. Thus, experiments may be conducted, using a limited number of representative firms (simulation), a certain geographical area (e.g. a free port) or a restricted period of time. However, in order to conduct such

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[129] The Council of State *(Raad van State)* reports that the number of legislative proposals submitted to it for advice (which is obligatory), reached a record level in 1993 (NRC-Handelsblad 13 April 1994).

[130] See e.g. Sandford and Hasseldine [1992, p. 15].

experiments in a meaningful way, many conditions must be fulfilled[131]; moreover, experiments may be costly, and harm particular businesses or regions.

Instead of experiments during a limited period of time, a provision may be introduced to the effect that new regulation will be automatically abolished at a predetermined date, except if it is explicitly decided to continue until a new evaluation date (sunset legislation, see e.g. Hunkeler [1985, p. 176]). Thus, it may be avoided that legislation is allowed to remain in force long after the original goal has been reached, or after it has become clear that goals aimed at will never be realised by those rules. In the Netherlands, the government has rejected sunset regulation for subsidy programmes, because of the heavy burden this would, reportedly, put on the legislative process, and because of the (probably justified) fear that continuation of existing legislation would soon become a routine procedure, without the intended evaluation really taking place [MvF and MvJ 1993, p. 19].

Reducing the number of programmes or affected parties

Focusing more specifically on the tax-benefit system, operating costs may be reduced primarily by *reducing the number of programmes, or affected parties.* Thus, probably the most effective cost reduction could be accomplished by simply abolishing relatively high-cost tax-benefit programmes[132]. Fewer taxes, but with a broader base, could yield the same revenue at lower operating costs[133]. Similarly, the number of taxpayers could be reduced by increasing thresholds or allowances. In the case of small firms or low-income individuals, revenue collected may fall short of operating costs, so no net revenue is retrieved anyway. An effective reduction of the operating costs of PIT would be achieved by making sure the correct amount of wage tax is withheld, thus reducing the number of PIT returns[134]. The introduction of generous standard deductions and exemptions may reduce the number of itemisers and the number of taxpayers filing a tax return, respectively.

The operating costs of social security programmes could also be cut through reducing the number of programmes. In the Netherlands, there has been some recent discussion on the merits of a guaranteed minimum income programme, administered by the tax authorities (negative income tax), or a single benefit

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[131] E.g., in the case of an experiment in a particular area, mobility of productive factors may bias the results; some effects may only show after a long period of time; the region must be truly representative of the entire country, etc. (see Dicke and Hartung, op. cit.).

[132] Stevens [1993] suggests abolishing the Dutch wealth tax and transfer tax. According to our estimates, this could save Gld 330m annually (table 7.1).

[133] In the theory of public finance, which mostly ignores administrative costs and (especially) compliance costs, apparently the opposite is advised. In order to minimise excess burdens, taxes should be spread out as much as possible. Then, substitution between taxed and tax-free commodities is not encouraged, and tax rates can remain moderate. See e.g. Boadway and Wildasin [1984, section 9.2].

[134] The so called 'Oort-legislation' was partly aimed at such a reduction.

programme[135]. In the first case, the entire social security bureaucracy (industrial insurance boards, GAK, GMD, SVr, SVB, etc.) could be abolished. On the other hand, the number of beneficiaries might increase dramatically, creating possible funding problems.

Virtually every citizen both pays taxes and social insurance contributions to the public sector, and at the same time receives a variety of benefits and subsidies. Even minimum-wage earners and benefit-recipients pay income tax. On the other hand, middle and upper-income classes benefit from e.g. family allowances and student grants. Thus, the question arises whether it would be possible to simultaneously cut back both inputs and outputs of the tax-benefit system, thus leaving everyone better off thanks to of lower costs[136]. In practice, it would be impossible to conduct such an operation without making anyone worse off, however: there will always be individuals who will stand to lose more than they gain. Thus, either policy makers must accept this consequence, or net losers should, somehow, be compensated. Considering the fact that a sizeable proportion of redistributive programmes benefits the middle and even upper-income classes, the opportunities of *balansverkorting* seem to deserve more serious study[137].

Programme structure

Apart from a reduction in the number of programmes or affected parties, costs could be saved through a *well designed structure* of the tax-benefit system. First, programmes should be as simple as possible. The number of rates, exemptions, deductions, etc. of taxes should be minimised. In the case of social security programmes, costs may be saved by straightforward benefit levels (e.g. related to the minimum wage instead of previous earnings[138]). Alternatively, the selectivity of benefit programmes could be reduced, thus stripping programmes of a number of complications, e.g. concerning supplementary income, domestic situation, etc.

Because of their relative simplicity, the AOW and AWW-programmes (old age pensions and widows and orphans benefits, respectively) might be used as models of income transfer programmes with minimum operating costs. The AOW-

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[135] Zalm [1993, pp. 558-559], Duindam [1993a, pp. 711-713 and 1993b, pp. 897-898], Renooy and van Geuns [1993, pp. 894-895], Den Broeder [1993, pp. 895-897].

[136] In Dutch, this is called *balansverkorting*. See e.g. De Kam and van Herwaarden [1989, pp. 161-164]. Van Herwaarden et al. [1990] calculated the consequences of two such proposals for the personal income distribution.

[137] Recently, *balansverkorting* received some attention, when the State Secretary for Public Housing proposed to stop subsidies to housing corporations, while at the same time acquit the corporations from their debts to the state. Similar proposals have been formulated with respect to rent subsidies and the deductibility of mortgage rent payments from taxable income (Het Financieele Dagblad, 8 December 1993). The Minister of Education proposed to reduce study grants while simultaneously abolishing tuition fees (Het Financieele Dagblad, 11-13 December 1993).

[138] This is the case in the so-called *ministelsel*, a proposal for a minimal system of social security. For an assessment see De Kam and Van Herwaarden [1991, pp. 111-132].

programme is large enough to enjoy economies of scale in administration. Excluding the costs of collecting contributions, administrative costs per benefit year of AOW amounted to Gld 90 in 1990 (tables 4.21 and 4.31). The compliance costs of receiving AWW amount to Gld 160 per benefit year (tables 4.31 and 6.20); costs to AOW-recipients are probably in the same order of magnitude. If the AAW/WAO, WW, TW, AOW, AWW and ABW/IOAW/IOAZ-programmes were replaced by a simple AOW-type programme, financed out of general revenue, the maximum cost saving potential would be in the order of Gld 3.5bn, or about 50 per cent[139]. This is the price we pay for the more equitable system in operation now. Of course, the number of beneficiaries would surge tremendously, should such a general programme be introduced; part of the higher operating costs of the present system are the direct consequence of limiting benefits to certain target groups.

Next, tax bases, definitions, procedures, payment periods etc. should be harmonised as much as possible. The Oort-legislation combined personal income tax and contributions for national social insurances into one single levy. The tax base of employees' social insurances is still different, however. Combining all such contributions in one single payroll tax, as suggested by both the Grapperhaus Commission [1985] and the Stevens Commission [1991], would probably result in administrative costs rising only marginally higher than TCA collection costs of the present combined payroll tax. In the present system, the industrial insurance boards spend Gld 130m to collect contributions. Compliance costs to business might go down as well[140].

In order to reduce business compliance costs, both assessment and payment of taxes and contributions should be tuned to the firm's administration. Forms, e.g., could be tailor-made for the firm itself, according to general rules set out by the tax or social insurance authorities. Electronic data interchange (EDI) might be more efficient than paperwork. Payment periods should be linked with the period of business accounts.

A common complaint of business is that identical information has to be supplied again and again to different government agencies. Compliance costs could be reduced by the introduction of one single 'counter': an office which retrieves and compiles the necessary information and then distributes it to various

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[139] TCA costs are supposed to remain constant. Excluding TCA costs, administrative costs per benefit year amount to Gld 630 (tables 4.24 and 4.31). Replacing the present system by a single benefit programme with administrative costs of Gld 90 per benefit year would save Gld 540 per benefit year. Keeping the total number of benefit years constant, Gld 3.2bn of administrative costs could be saved. In fact, the number of benefit years might fall, because in the present system, many individuals receive more than one benefit (e.g. family allowance plus unemployment benefit). Computed in a similar way, compliance costs of receiving benefit could drop by about Gld 325m (table 6.20). Total cost saving potential thus comes at Gld 3.5bn.

[140] Bosch et al. [1992, p. 14] states that levying the present payroll tax plus contributions for employees' social insurances by the TCA, would annually save Gld 100m for industrial insurance boards, while the TCA would incur extra costs of Gld 24m. For employers, no significant change of compliance costs would result.

administrative bodies. Alternatively, the data bases of different administrative agencies could be linked or even merged. This would also reduce administrative costs, because it greatly facilitates verifications. In recent years, such action has been taking place at an increasing scale. Thus, income data on application forms for rent subsidy are checked, using the files of the TCA. It would seem that not all opportunities in this field have been fully exploited yet. This is partly a consequence of legislation to protect privacy, and related Big Brother fears.

It is not only the number and complexity of programmes that cause high operating costs; the frequency and the extent of *changes* in regulations also contribute to the problem to a considerable extent. Legislative changes should, therefore, be minimised, and not be enacted overnight, sometimes evoking additional repair measures. The timing of legislative changes is also an important factor to reckon with. Apart from adaptation costs, frequent changes give rise to uncertainty, and thus increase psychological compliance costs.

Finally, information should be made available at low costs, e.g. through free leaflets, tuned to the needs of different groups or through a free telephone service (like the Dutch 'tax phone'). Information leaflets and booklets must be readable for the target group; again, simplicity seems to be best. The commandment of simplicity also applies to the structure of tax forms, application forms and the like [Lewis 1979].

8.3.2 Administration

Administrative efficiency

Recently, some doubt has been raised as to the efficiency of public bodies administering the Dutch tax-benefit system. Until recently, administrative costs were not really an issue. In many cases, the magnitude of such costs was not even known[141]. Gradually, the idea has gained ground that because pressure from market forces is lacking, there is no built-in mechanism controlling administrative costs. Because of the low visibility of administrative costs, political pressure to contain costs was lacking as well. Moreover, the strict budgetary and other rules which apply to government administration sometimes stand in the way of efficiency[142]. Separating policy-making and programme administration could be an answer. The latter could then be subjected to the discipline of the market. There are, broadly speaking, two ways to tackle the problem: more freedom for agency

[141] E.g., the National Audit Office [Algemene Rekenkamer a, 1988 issue] concluded that in only 211 out of 722 cases, information on administrative costs of subsidy programmes was available.

[142] The budgetary distinction between personal and material administrative costs, e.g., makes it impossible to use funds designated for material expenditures for hiring more staff, or vice versa, even if this would increase efficiency. As from 1 January 1994, the budgets for staff and material expenditures will be joined, though [MvF b, 1994 issue, pp. 79-80].

management combined with cost control through regulation, and the introduction of market elements[143].

Introducing market elements
Market pressure which secures efficiency in administration may be introduced by privatisation of administering agencies, or the introduction of independent organisations or government-owned companies. The hierarchical relationship with the responsible minister disappears. Strict financial rules of government organisations no longer apply. Competition between administering agencies should then reduce costs to a minimum. Thus, e.g., employers and employees could be given the freedom to choose the administrator of employees' insurance programmes among industrial insurance boards and (other) private firms (e.g. already existing insurance companies).

Functional decentralisation
An alternative to privatisation is the introduction of relatively independent government agencies. The relevant minister remains responsible, but the management are given greater responsibilities, which should enable them to operate more efficiently. Because no market pressure exists in this case, incentives must be introduced for the management in order to ensure that potential efficiency gains are actually realised. As economic systems may be based on the market or on central planning, in the case of tax-benefit administration, market discipline may be substituted by directives or rules. Thus, total administrative costs may be budgeted, as in the case of the Dutch health care insurances (ZFW and AWBZ). Alternatively, a set of output indicators *(kengetallen)* may be developed to assess the productivity of agencies. Then, managers would be made responsible for attaining measurable goals.

The output measures which are used as standards for performance evaluation should, however, be very carefully chosen, in order to minimise strategic behaviour: managers will be motivated to increase *measured* output, instead of trying to generate the desired policy outcomes. After all, this is largely how centrally planned economies used (not) to work.

Probably the most important yardstick in this respect are the administrative costs per unit of output, however measured. As these are unknown in many cases, there is obviously much work to be done. It is tempting to advocate here the most rigorous application of procedures aimed at developing accurate cost data. However, it should be kept in mind that this is rather costly, and thus possibly in some cases not completely worth while. In order to control administrative costs, complete cost allocation is not always efficient, especially because of the existence of considerable joint costs. Van der Dussen [1993] argues that cost attribution is largely arbitrary, and thus not very useful for cost control. *Activity based costing*, which uses the notion that *activities*, not *products*, generate costs, is thought to be

[143] For more on this issue, see e.g. Kraan [1992], MvF [b, 1994 issue, Ch. 5], or Boneschansker and De Haan [1991].

more functional. Thus, the production process itself is to be analysed, and costs and benefits of different processes and activities judged.

As per 1 January 1994, several so called *agentschappen* were introduced; government agencies with delegated management responsibilities [MvF b, 1994 issue, p. 78]. One of them is SENTER, which administers PBTS (see section 4.2.3). The freedom to allocate the available resources efficiently is thus greatly increased. Moreover, cost accounting may be applied instead of accounting on a cash-obligations basis, as is prescribed for government organisations (see section 3.2.1). It is still too early to be able to assess the efficiency of *agentschappen*.

In both cases, whether it be independent organisations or decentralised government agencies with extended responsibilities, it is imperative that *incentives* exist which ensure that potential efficiency gains are actually realised. An example of the contrary is the case of industrial insurance boards, which administer employees' social insurances. These are managed by employees' and employers' organisations. There is no market competition, because firms are obliged to join the board that covers their economic activity. However, there is no independent supervisor to monitor efficiency either.

8.4 Improving the distribution of operating costs

Although the level of operating costs of tax-benefit programmes could be somewhat reduced, some costs will always remain. The detrimental effects of such costs could be reduced by an optimal *distribution* of operating costs. As we have seen, compliance costs are distributed very unevenly between businesses and individuals, respectively. Small businesses and the self-employed are particularly heavily burdened. In a market where firms of unequal size operate, smaller firms are unable to fully incorporate compliance costs in their sales prices, because they would price themselves out of the market if they did. Thus, self-employment is discouraged, and small businesses are at a comparative disadvantage towards bigger firms. The tax-benefit system both encourages economic concentration and creates barriers to entry for new firms. Small business plays an important part in employment creation and innovation, and in preserving competition (section 2.2.3). Moreover, distortions of allocation result in economic inefficiencies.

Such detrimental effects to the economy could be reduced by a re-distribution of operating costs. In the first place, part of compliance costs could be shifted to the public sector. In section 2.3.1, we pointed out a certain trade-off between compliance costs and administrative costs. The burden of *administrative* costs can more easily be distributed over taxpayers in a way that is considered fair.

In the second place, the regressiveness of compliance costs could be reduced by relieving the administrative burden for small business. This goal could be

achieved by excluding small business from several programmes altogether, e.g., by increasing the registration threshold for VAT[144].

A third option would be to *compensate* firms incurring especially high compliance costs, or even all firms incurring compliance costs. One advantage of this approach is that government would then be able to trade off administrative costs and (compensations for) compliance costs. The considerable variation between firms, however, implies that a complete compensation for compliance costs to firms is hardly feasible. Only a very complicated programme, which takes into account all relevant firm characteristics, would offer fair compensation. The extra bureaucracy needed, though, would greatly increase overall costs (including compliance costs themselves).

Some general measures are conceivable, however, like the lengthening of return periods for small firms, which increases cash flow benefits (e.g. advocated by Sandford et al. 1989, pp. 216-217]). The Dutch State Secretary of Finance rejected such a proposal, on the grounds that it would not reduce compliance costs [Commissie MKB 1991, p. 10]. The State Secretary does not seem to have been aware of the uneven distribution of compliance costs, though. The same can be said of the Minister of Economic Affairs, who considers compliance costs as an ordinary part of production costs, which is fully incorporated in sales prices, and therefore rejects a transfer of (part of the) compliance costs to the public sector [EZ 1989b, p. 4].

8.5 Concluding remarks

The issue of administrative and compliance costs of tax-benefit programmes has been largely neglected for a long time. However, there are hopeful signs that this situation is changing. In recent years, official publications have increasingly stressed the need to control both administrative and compliance costs. Thus, the first condition for better control of the operating costs of the tax-benefit system seems to be fulfilled.

Actual improvement will depend on whether only lip service is being paid to the ideal of lower operating costs, or whether good intentions will indeed translate into action. Apart from mere recognition of the problem, the issue of operating costs should be weighted systematically, together with other policy goals, in the process of decision making. Before new legislation is introduced, or before existing legislation is changed, the resulting impact on operating costs should be evaluated, keeping in mind the already existing cost level related to other programmes. After all, the present high level of total operating costs is the result of years of small increases, many of them hardly noticeable, which nevertheless, together, represent a major cost to society.

In addition, specific measures aimed at cost reduction or re-distribution might be envisaged. No general rules can be given to achieve this; every single

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[144] There are disadvantages to this approach: e.g. in the case of VAT, businesses using mainly taxable imputs will wish to remain registered [Godwin and Sandford 1983, p. 281].

programme should be scrutinised in order to discover how operating costs can be reduced.

The results of this study show that there is a lot to gain. It is obvious, however, that there is still a long way to go, and that the going will often be tough. After all, the record of simplification attempts until now is not exactly encouraging. However, this is not to imply that progress along this road is impossible. It just means that we will have to try harder.

Samenvatting (summary in Dutch)

Kosten van overdrachten

Wat is onderzocht, en waarom?
In de welvaartsstaat Nederland wordt een groot deel van het nationale inkomen herverdeeld via de publieke sector (de overheid en de organisaties die de sociale verzekeringen uitvoeren). Burgers en bedrijven betalen belastingen en sociale verzekeringspremies aan de publieke sector, die op zijn beurt weer allerlei subsidies en uitkeringen geeft aan burgers en bedrijven. Deze betalingen over en weer worden *overdrachten* genoemd; dat zijn betalingen waaraan geen directe tegenprestatie is verbonden. Natuurlijk ziet de belastingbetaler het nodige terug voor zijn geld, maar de mate waarin hij van de overheid profiteert staat los van de bijdrage aan het collectief.

De regelgeving op het gebied van overdrachten is spreekwoordelijk ingewikkeld. Veel adviseurs danken hieraan hun boterham. Weliswaar zijn verschillende pogingen gedaan om deze regels te vereenvoudigen, maar veel resultaat is hiermee nog niet geboekt. Er is dan ook een omvangrijk apparaat in het leven geroepen om het systeem van overdrachten te administreren en te controleren. Hiertoe behoren grote organisaties als de belastingdienst, de bedrijfsverenigingen, GAK en GMD, maar ook allerlei vrij onbekende organisaties die elk een kleine doelgroep bedienen. Niet alleen de publieke sector houdt zich met overdrachten bezig; ook bedrijven en gezinnen zijn erbij ingeschakeld. Zo moeten werkgevers bijvoorbeeld loonbelasting en sociale-verzekeringspremies voor hun werknemers inhouden, en moeten bedrijven BTW innen op hun verkopen. Hiermee zijn aanzienlijke administratieve lasten gemoeid. Particulieren moeten bijvoorbeeld belastingaangifte doen, huursubsidie of een uitkering aanvragen.

Al met al zijn er heel wat mensen vrijwillig en onvrijwillig ingeschakeld om de geldstromen tussen particuliere en publieke sector gaande te houden. Men zou zich dus kunnen afvragen welke kosten (tijd en geld) hiermee zijn gemoeid. Over de kosten van het rondpompen van vele tientallen miljarden per jaar was tot voor kort zo goed als niets bekend. Dat geldt met name voor de kosten die door burgers en bedrijven worden gemaakt. Ook in het buitenland is hiernaar betrekkelijk weinig onderzoek gedaan. Dit is vreemd, omdat voor een evenwichtige besluitvorming over regelgeving op het - toch niet onbelangrijke - gebied van belastingen, subsidies en sociale zekerheid, de baten tegen de kosten zouden moeten worden afgewogen. Politici lijken zich echter vooral te fixeren op de te verwachten *voordelen* van wetsvoorstellen, waarbij (naast politieke haalbaarheid) alleen de *financiering* als probleem wordt gezien. De *kosten* van het op gang brengen en houden van geldstromen worden licht over het hoofd gezien - dat kan ook makkelijk, als niemand zelfs maar bij benadering weet hoe hoog deze kosten zijn.

Dit onderzoek is verricht om in de gesignaleerde leemte te voorzien. Het doel is om een schatting te presenteren van de totale kosten van het Nederlandse overdrachtensysteem in 1990. Deze kosten vallen uiteen in *nalevingskosten* (in het

Engels: compliance costs) voor burgers en bedrijven, en *uitvoerings- of inningskosten*[145] (administrative costs) voor de publieke sector. De kosten worden zoveel mogelijk uitgesplitst naar regelingen (soorten belastingen, subsidies en uitkeringen) en kostensoorten (bijvoorbeeld personele en materiële kosten), en naar betrokkenen (bijvoorbeeld bedrijven uit verschillende sectoren, en met verschillende omvang). Waar mogelijk, worden de resultaten vergeleken met die van buitenlandse studies. Vanzelfsprekend zijn niet *alle* overdrachtsregelingen onderzocht: dat zijn er vele honderden, waaronder een groot aantal zeer kleine (vooral subsidies). De ondergrens is gelegd bij een omvang van honderd miljoen gulden per jaar. Bij elkaar zijn dertig (groepen van) regelingen onderzocht, waarmee in 1990 een totale geldstroom van driehonderd miljard gulden was gemoeid (ter vergelijking: het nationale inkomen bedroeg in dat jaar ruim 450 miljard gulden).

Samenvatting per hoofdstuk

Het boek bestaat uit drie delen. Deel één behandelt de theoretische en de methodologische achtergrond van de studie. In deel twee wordt het empirische onderzoek besproken en worden de resultaten daarvan gepresenteerd; in deel drie worden de resultaten samengevat en conclusies getrokken.

Deel één begint met een inleiding (**hoofdstuk 1**). Hierin wordt de betekenis van overdrachten in Nederland besproken, en wordt uitgelegd welke soorten kosten (ook indirecte, die verder buiten dit onderzoek vallen) hiermee zijn gemoeid. Vervolgens wordt nagegaan in hoeverre deze kosten een rol spelen in de economische wetenschap en bij het overheidsbeleid. Het blijkt dat men zich van deze kosten veelal niet bewust is. Onderzoek is er nog weinig naar gedaan, zeker in Nederland. Buitenlandse onderzoeken blijven meestal beperkt tot één of enkele belastingen; bovendien zijn ze vaak gebaseerd op kleine of niet-representatieve steekproeven. De nalevingskosten van subsidies of uitkeringsregelingen zijn, voor zover bekend, nog nooit ergens onderzocht. Bij de beleidsvorming spelen uitvoerings- en nalevingskosten nauwelijks een rol - wellicht ook door het ontbreken van het benodigde cijfermateriaal. Ten slotte worden in hoofdstuk 1 de reikwijdte van het onderzoek en de opzet van het boek besproken.

Hoofdstuk 2 geeft het theoretische kader van het onderzoek. Eerst worden verschillende kostensoorten gedefinieerd. Het blijkt moeilijk te zijn om precies af te bakenen welke kosten tot nalevings- of uitvoeringskosten moeten worden gerekend. Geconcludeerd wordt dat het niet de moeite loont om een exacte kostenspecificatie op te stellen, omdat de omvang van de kosten in veel twijfelgevallen relatief gering is (bijvoorbeeld de kosten van belastingrechtspraak of -beleid), en wegvallen in de foutenmarges van de schattingen die wel gemaakt kunnen worden. Er is dan ook voor een pragmatische aanpak gekozen, waarbij per regeling wordt gekeken welke kosten moeten (en kunnen) worden meegerekend.

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[145] Door sommigen ook wel *perceptiekosten* genoemd.

Vervolgens worden in hoofdstuk 2 de factoren geïdentificeerd die van invloed zijn op de hoogte van de te onderzoeken kosten, en er worden richtlijnen gepresenteerd om de hoogte van de kosten te beoordelen. De ideale hoogte van innings- of uitvoeringskosten volgt voornamelijk uit een afweging van de ingewikkeldheid van de regelgeving tegen de kwaliteit van de uitvoering. Bij de nalevingskosten spelen vooral de nadelige economische gevolgen daarvan voor bedrijven een rol; uitgelegd wordt dat concurrentieverhoudingen worden verstoord, waardevolle economische activiteiten worden ontmoedigd en de internationale concurrentiepositie wordt beïnvloed.

Ten slotte wordt in hoofdstuk 2 de verhouding tussen nalevingskosten en innings/uitvoeringskosten onder de loep genomen. Het blijkt dat er enigszins kan worden geschoven met kosten tussen de publieke en de particuliere sector. Beargumenteerd wordt dat de kosten zo min mogelijk zouden moeten worden afgewenteld op de particuliere sector, behalve wanneer dit substantiële doelmatigheidswinst oplevert.

Hoofdstuk 3 behandelt mogelijke methoden om kosten van naleving, uitvoering en inning te kwantificeren, en enkele waarderingsproblemen. De voor- en nadelen van documentenonderzoek, case studies, enquêtes, dagboekstudies en modelsimulatie worden op een rij gezet. Vervolgens wordt besproken welke meeteenheden geschikt zijn, hoe indirecte kosten (overhead) en interne verrekenprijzen moeten worden behandeld, en hoe bestede tijd en psychologische kosten moeten worden gewaardeerd. Hiermee is deel één van het boek afgesloten.

Deel twee behandelt het onderzoek naar de hoogte van de kosten van overdrachten voor achtereenvolgens de overheid, het bedrijfsleven en gezinnen. De kosten voor de overheid (**hoofdstuk 4**) zijn voornamelijk bepaald aan de hand van gepubliceerde cijfers. In veel gevallen ontbreken deze echter, of zijn ze onvolledig of onduidelijk. In die gevallen is rechtstreeks contact gezocht met de relevante uitvoeringsorganisaties; via bezoeken, briefwisseling en telefonische contacten zijn de ontbrekende gegevens verzameld. Tabel 4.32 vat de resultaten samen.

De totale gekwantificeerde uitvoeringskosten bedragen ruim 6 miljard gulden. Bijna twee derde daarvan komt voor rekening van de sociale zekerheid, en één derde voor rekening van de belastingen. De uitvoeringskosten van de onderzochte subsidies maken ongeveer vier procent uit van het totaal. Als percentage van het uitbetaalde of ontvangen bedrag (belastingopbrengst, subsidie- of uitkeringsbedrag) variëren de kosten van 0,4 procent (investeringspremieregeling zeescheepvaart) tot 14,7 procent (WW). De totale kostenquote (kosten als percentage van uitgekeerd of geïnd bedrag) bedraagt 2,7 procent.

In paragraaf 4.7 worden de uitvoeringskosten van de verschillende sociale zekerheidsregelingen vergeleken, door ze te relateren aan uitkeringsjaren en uitgekeerde bedragen. De laatste paragraaf van hoofdstuk 4 laat zien dat (beperkte) internationale vergelijkingen suggereren dat Nederland niet erg uit de toon valt wat uitvoerings- en inningskosten betreft.

Hoofdstuk 5 doet verslag van een eigen onderzoek bij bedrijven (inclusief non-profit organisaties). De resultaten zijn gebaseerd op een gestratificeerde, landelijke steekproef uit het bestand van de gezamenlijke Kamers van Koophandel. In totaal werden 1053 bruikbare ingevulde vragenlijsten terug ontvangen. De respons is hiermee vrij laag (20 procent), ondanks alle pogingen om zoveel mogelijk bedrijven mee te laten doen. Uit eerder (buitenlands) onderzoek was al bekend dat dit soort enquêtes een lage respons oplevert, omdat invullen vrij lastig is (van nalevingskosten wordt doorgaans geen administratie bijgehouden), en omdat bedrijven huiverig zijn om financiële gegevens vrij te geven. Daarom is tevens onderzocht of bedrijven die niet meewerkten wellicht systematisch afweken van wèl participerende bedrijven. Het bleek dat non-respondenten waarschijnlijk hogere nalevingskosten hebben dan respondenten. De uitkomsten van de bedrijvenenquête vormen dus vermoedelijk een *onder*schatting van de werkelijke kosten.

De hoogte van de nalevingskosten blijkt te variëren met de omvang van het bedrijf en met de bedrijfstak; daarom zijn de resultaten gewogen naar deze variabelen. De gemiddelde nalevingskosten per bedrijf bedroegen 12.000-14.000 gulden per jaar. Alle bedrijven samen zijn jaarlijks zes tot acht miljard gulden kwijt aan nalevingskosten. Dat is drie procent van de loonsom, anderhalf procent van het bruto binnenlands produkt en vier procent van de belasting- en premieopbrengst afkomstig van bedrijven. Aangezien de steekproef de kosten onderschat, zullen de werkelijke kosten waarschijnlijk bovenin dit betrouwbaarheidsinterval liggen. Tabel 5.11 vat de resultaten samen per regeling. Loonheffing en BTW veroorzaken de hoogste kosten: respectievelijk 43 en 29 procent van de totale kosten.

Een belangrijk resultaat is de grote ongelijkheid waarmee de nalevingskosten over bedrijven zijn verdeeld. Hoe kleiner het bedrijf, hoe hoger de kosten per werknemer of als percentage van de omzet zijn. Dit betekent dat kleinere bedrijven, die met grotere moeten concurreren, een concurrentienadeel ondervinden. Het huidige systeem van overdrachten bevordert dus de economische concentratie. Verschillen tussen bedrijfstakken blijken grotendeels aan verschillen in bedrijfsgrootte te moeten worden toegeschreven. Alleen de handel springt er uit met relatief hoge nalevingskosten. Voor zover internationale vergelijkingen mogelijk zijn, lijkt het er op dat de situatie in Nederland niet veel afwijkt van die in andere landen.

Hoofdstuk 6 gaat over de nalevingskosten voor gezinnen. De gegevens zijn verzameld door middel van een grootschalige, representatieve enquête in samenwerking met het Sociaal en Cultureel Planbureau (SCP). In totaal deden 10.992 personen van 16 jaar en ouder mee, een respons van 44 procent. Omdat de enquête onderdeel was van een veel grotere enquête (het AVO 1991 van het SCP), maakten de vragen over nalevingskosten maar een klein deel uit van de totale vragenlijst. Het is daarom minder waarschijnlijk, dat personen met hoge of juist lage kosten relatief vaak weigerden om mee te doen, zoals dat bij de bedrijvenenquête waarschijnlijk wèl het geval was. De non-respons is dan ook niet nader onderzocht.

Tabel 6.20 vat de resultaten samen. Aan de gemiddelde aangifte voor de inkomstenbelasting wordt drie uur eigen tijd besteed, naast anderhalf uur onbetaalde hulp van familie of vrienden. Daarnaast besteden gezinnen gemiddeld 77 gulden

aan bijvoorbeeld advies of de aanschaf van een belastinggids. Er zijn grote verschillen tussen belastingplichtigen; vooral zelfstandigen maken veel kosten. In guldens uitgedrukt bedragen de kosten voor alle belastingplichtigen samen 1,7 miljard gulden. Vermogensbelasting veroorzaakt nalevingskosten ter hoogte van 250 miljoen gulden op jaarbasis, 17 procent van de opbrengst van deze belasting. Van de onderzochte sociale-zekerheidsuitkeringen en huursubsidie bedroegen de kosten een half tot drie procent van het totale uitgekeerde bedrag. (De kosten van de aanvraag zelf zijn hier om technische redenen overigens buiten beschouwing gebleven.)

Omdat de nalevingskosten van subsidies en sociale-zekerheidsuitkeringen voor zover bekend nooit eerder werden onderzocht, konden alleen de gevonden kosten van belastingen worden vergeleken met resultaten van eerder onderzoek (dat overigens zonder uitzondering op kleinere steekproeven is gebaseerd). Uit een voorzichtige internationale vergelijking blijkt dat de Nederlandse inkomstenbelasting en vermogensbelasting waarschijnlijk relatief lage nalevingskosten met zich meebrengen.

Deel 3 van het boek brengt de resultaten uit deel twee bij elkaar, waarna conclusies kunnen worden getrokken en beleidsimplicaties worden geformuleerd. **Hoofdstuk 7** geeft een totaaloverzicht van de innings-, uitvoerings- en nalevingskosten van de onderzochte regelingen (tabel 7.1; een vertaling van deze tabel is als bijlage achter deze samenvatting opgenomen). De kosten die konden worden achterhaald bedragen samen meer dan 15 miljard gulden op jaarbasis. Dat is ruim 5 procent van de totale geldstroom die met deze regelingen is gemoeid (belastingen, subsidies en uitkeringen). Wanneer rekening wordt gehouden met de vermoedelijke onderschatting van de kosten voor bedrijven, met niet-achterhaalde kosten en met niet onderzochte regelingen komen de totale kosten wellicht in de buurt van de 20 miljard gulden per jaar; dat is 4 procent van het bruto binnenlands produkt (in 1990). Omdat geen enkel buitenlands onderzoek met een vergelijkbare reikwijdte bekend is, is een internationale vergelijking van de totale kosten niet mogelijk.

Van de 15 miljard gulden die kon worden achterhaald, komt 40 procent voor rekening van de publieke sector; 46 procent van de kosten wordt gemaakt door bedrijven, en 14 procent door huishoudens. Omdat de kosten voor het bedrijfsleven gedeeltelijk ten laste komen van de belastbare winst, en omdat het inhouden van bijvoorbeeld BTW een rentevoordeel voor bedrijven kan opleveren, wordt naar schatting 2,2 miljard van de kosten voor het bedrijfsleven gedragen door de publieke sector. Als we hiermee rekening houden komt niet 60, maar toch nog 45 procent van de totale kosten - 6,9 miljard gulden - voor rekening van de particuliere sector. Vanzelfsprekend worden *uiteindelijk alle* kosten door de particuliere sector gedragen, omdat de publieke sector uit belastingopbrengsten en premies wordt gefinancierd.

In **hoofdstuk 8** worden de conclusies samengevat:

- De totale kosten van overdrachten zijn aanzienlijk: ten minste 15 miljard gulden per jaar. Als bedrijfstak kan het Nederlandse systeem van overdrachten zich meten met bijvoorbeeld de hout- meubel- en bouwmaterialenindustrie.

- De kosten van de verschillende belastingen, subsidie- en uitkeringsregelingen verschillen enorm, zowel absoluut als relatief. Bij vermogensbelasting, invoerrechten, werkloosheids-, bijstands- en toeslagenwetuitkeringen bedragen de kosten meer dan tien procent van de belastingopbrengst of het uitkeringsbedrag.
- Het grootste deel van de kosten (60 procent) bestaat uit nalevingskosten voor particulieren en bedrijven; innings- en uitvoeringskosten voor de overheid maken 40 procent uit van het totaal.
- De hoogte van de nalevingskosten verschilt enorm per bedrijf. Ook tussen huishoudens bestaan grote verschillen. Met name zelfstandigen hebben relatief hoge nalevingskosten.
- De last van de nalevingskosten voor het bedrijfsleven drukt onevenredig zwaar op kleinere bedrijven. Dit leidt tot een concurrentienadeel voor het midden- en kleinbedrijf.

Tot slot worden enkele beleidsimplicaties besproken. Met nadruk wordt gesteld dat het hier geen aanbevelingen betreft: er wordt slechts een aantal denkrichtingen aangegeven. *Alle* genoemde mogelijkheden hebben hun nadelen. Vanzelfsprekend is het belangrijkste doel van een overdrachtsregeling niet het minimaliseren van de daaraan verbonden kosten. Wel is het zo, dat de kosten van overdrachten veel nadrukkelijker in de afweging zouden moeten worden betrokken.

Eerst wordt in hoofdstuk 8 nagegaan hoe het kostenniveau mogelijk kan worden teruggebracht. In de eerste plaats kan dat door aanpassing van overdrachtsregelingen. Zo kan misschien bij sommige regelingen het aantal personen of bedrijven dat erbij betrokken is worden verkleind, bijvoorbeeld door het verhogen van belastingvrije of forfaitaire bedragen, of door ervoor te zorgen dat voor zoveel mogelijk inkomstenbelastingplichtigen de loonheffing tevens eindheffing is, zodat geen aangifte hoeft te worden gedaan. Ook kunnen relatief dure regelingen worden afgeschaft. Dat kan bijvoorbeeld door balansverkorting, het gelijktijdig afschaffen of verlagen van zowel belastingen als subsidies of uitkeringen. Verder kan de structuur van relatief dure regelingen worden aangepast. Van een aantal kenmerken van regelingen is gebleken dat zij met hoge kosten gepaard gaan. Bij de sociale zekerheid gaat het dan om ingewikkelde voorschriften met betrekking tot bijvoorbeeld voormalig inkomen, bijverdiensten, woonsituatie en vermogen. Verder is het zaak om grondslagen, definities, procedures, afdrachtsperioden, enzovoort, zoveel mogelijk te harmoniseren. Berekening en afdracht van door bedrijven te betalen belastingen en premies dienen zoveel mogelijk te worden afgestemd op de bedrijfsadministratie. Dat geldt ook voor van bedrijven verlangde informatie. Bovendien kan de hoeveelheid door bedrijven te verstrekken informatie worden beperkt, bijvoorbeeld door het instellen van één 'loket', dat vervolgens de verschillende uitvoeringsorganisaties bedient, of door het koppelen van gegevensbestanden. De bescherming van de persoonlijke levenssfeer moet dan wel worden gewaarborgd. Veranderingen van bestaande en het invoeren van nieuwe regelingen vormen een belangrijke bron van aanpassingskosten en onzekerheid. Verandering van regelgeving dient zoveel mogelijk te worden beperkt, en moet zeker niet overhaast worden ingevoerd.

Naast de vormgeving van overdrachtsregelingen is de doelmatigheid van de uitvoering belangrijk voor het kostenniveau. Mogelijk kan het blootstellen van uitvoeringsorganisaties aan concurrentie of functionele decentralisatie de kosten beperken.

Naast pogingen om de kosten te verlagen, kunnen beleidsmakers proberen de verdeling ervan te verbeteren, zodat de schadelijke effecten op de economie verminderen. Dat kan door de relatief zware last van de nalevingskosten die nu op het midden- en kleinbedrijf drukt te verlichten. Doordat de kosten van bedrijf tot bedrijf sterk verschillen, is een volledige compensatie van de gemaakte kosten niet goed mogelijk. Wel zouden bijvoorbeeld vrij gemakkelijk de afdrachtstermijnen van loonheffing en BTW voor kleinere bedrijven kunnen worden verlengd, zodat zij een groter rente-voordeel krijgen.

De kosten die zijn verbonden aan regelingen op het gebied van belastingen, subsidies en sociale zekerheid zijn lang genegeerd. Het lijkt er op dat hierin verandering begint te komen. Dit boek bevat nadrukkelijk geen pleidooi tegen overdrachten. Het pleit er slechts voor om bij afwegingen rondom overdrachten, naast andere argumenten, ook nadrukkelijk de kosten te betrekken. Daarvoor zijn cijfers nodig. Vandaar dit onderzoek.

Tabel 7.1 De kosten van alle onderzochte overdrachtsregelingen, rond 1990 (miljoenen guldens)

	Ontvangsten/ uitgaven	Innings/ uitvoerings kosten	Nalevings- kosten bedrijven	Nalevings- kosten gezinnen	Totale kosten	Kosten quote (a) (%)
A. Belastingen en heffingen	(Ontvangsten)					
Kijk- en luistergeld	840	34	?	?	34	4,0
Milieuheffingen WABM	570	40	!	-	40	7,1
Invoerrechten	2.700	250	220	-	470	17,6
BTW	38.000	250	2.100	-	2.300	6,2
Bijzondere verbruiksbelasting op auto's en motoren	2.600	6	?	-	6	0,2
Accijnzen	9.700	82	70	-	150	1,5
Overdrachtsbelasting	1.700	11	?	-	11	0,7
Motorrijtuigenbelasting	3.700	88	?	?	88	2,4
Loon/inkomstenbelasting, premies(b)	130.000	1.200	3.700	1.200	6.100	4,8
Dividendbelasting	2.300	12	30	-	43	1,9
Vennootschapsbelasting	17.000	210	670	-	890	5,1
Vermogensbelasting	1.200	70	-	250	320	26,4
Successierechten	1.200	25	-	!	25	2,2
Onroerend-goedbelasting	3.100	70	60	?	130	4,3
Totaal belastingen en heffingen	210.000	2.300	7.000	1.500	11.000	5,1
Aandeel in totale kosten (%)		*22*	*65*	*14*	*100*	
B. Subsidies en uitkeringen	(Uitgaven)					
IPR (subsidie op regionale investeringen)	280	4	!	-	4	1,5
INSTIR (innovatiesubsidie)	100	4	!	-	4	3,8
PBTS (technologiesubsidie)	100	8	!	-	8	7,8
IPZ (investeringspremie zeescheepvaart)	110	0,4	!	-	0,4	0,4
Studiefinanciering	4.100	80	-	!	80	1,9
Tegemoetkoming Studiekosten	450	19	-	!	19	4,2
Huursubsidie	1.800	110	-	37	150	8,2
Arb.ongeschikth.verz.(AAW/WAO)	18.000	950	-	230	1.200	6,7
Ziektewet (ZW)	9.500	700	-	?	700	7,4
Werkloosheidswet (WW)	3.700	480	-	100	580	15,7
Toeslagenwet (TW)	450	63	-	?	63	13,8
Algemene ouderdomswet (AOW)	29.000	180	-	!	180	0,6
Weduwen- en wezenwet (AWW)	4.300	35	-	30	64	1,5
Kinderbijslag (AKW)	6.100	150	-	?	150	2,4
Bijstand (ABW/IOAW/IOAZ)	11.000	1.100	-	230	1.300	11,6
Totaal subsidies en uitkeringen	89.000	3.800	!	630	4.500	5,0
Aandeel in totale kosten (%)		*86*		*14*	*100*	
C. Verplichte informatieverstrekking			160		160	
Totaal (A+B+C)	**300.000**	**6.200**	**7.000**	**2.100**	**15.300**	**5,1**
Aandeel in totale kosten (%)		*40*	*46*	*14*	*100*	

Toelichting: niet-achterhaalde kosten die wellicht omvangrijk zijn, zijn met ! aangegeven; als ze waarschijnlijk verwaarloosbaar laag zijn, staan ze als ? in de tabel (voor een onderbouwing, zie paragraaf 7.2.1). Onderstreepte totalen en kostenquoten bevatten niet-achterhaalde kosten die met ! zijn aangegeven, en zijn dus onderschattingen. Een streepje (-) betekent: geen kosten.

(a) Kosten als percentage van geïnd of uitgekeerd bedrag (belasting, subsidie of uitkering).

(b) Premies volks- en werknemersverzekeringen (AAW, AOW, AWW, AWBZ, WAO, ZW en WW).

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Appendices

Appendix A

Technical aspects of business study

A1 Data handling and processing

A1.1 Partial non-response

The survey data have been processed using SPSS on a personal computer. Unfortunately, not all returned questionnaires were fully filled out[146]. Respondents who gave their telephone number were contacted and requested to supply the lacking data by telephone, but 59 per cent of the respondents chose not to reveal their identity. In several cases where information on the number of employees was lacking, the firm's size *class* could be deduced from stated labour costs. In cases where no compliance cost data were supplied, or information on economic activity or number of employees was completely absent, questionnaires were rejected as not usable. In the remaining cases, blanks were interpreted either as zeros or as missing values.

Blanks at questions 4 (total labour costs), 6a (value of owner's time), 6b (time spent by spouse/family), 9d (hourly cost of staff time) and 15 (costs of 'Oort' changes in tax laws) are interpreted as *missing values*. However, if the answers to questions 7, 9 and 12 show that the firm has no employees, the answer to question 4 becomes *zero*.

Blanks at questions 7 (total administration), 8 (external accountants and advisers), 13 (subsidies), 14 (information supplied regarding third parties), and 15 (changes of regulations) are also interpreted as *zeros*.

Blanks at questions 9abc (compliance with payroll taxes), 10 (compliance costs of other taxes) and 12 (taxes paid) are again interpreted as *zeros*. However, if the answer to question 12 shows that a certain tax was paid, corresponding blanks at questions 9 or 10 are treated as *missing values*, and vice versa.

A hyphen or a slash is interpreted as a *zero*.

A1.2 Inconsistent and incorrect answers

A number of questionnaires returned had clearly been completed inconsistently. For example, in several cases, compliance costs ascribed to external accountants and advisers, together exceed stated total costs of external professional help. In some cases, it was obvious that the respondent had not quite understood the question. Labour costs (question 4) were occasionally interpreted as number of employees. Some respondents reported compliance costs of personal income tax, while the answer to question 6a shows that there is no owner/manager, or while the firm

[146] The questionnaire is reproduced in Allers [1990b, appendix 3].

pays corporation income tax. These respondents have clearly failed to understand that personal income tax here relates to business income only, not to the income of employees.

Clearly incorrect answers that could not be corrected (e.g. by respondents who wished to remain anonymous) have been deleted. The same applies to outliers.

A1.3 Missing values

A total of 1,053 more or less usable questionnaires was received. Table A.1 shows the number of cases for which all cost data are available to calculate the compliance costs of particular taxes. Compliance costs of VAT, for instance, are calculated from five variables: time spent by owners/managers (1), family (2), and staff (3), fees paid to outside advisers, accountants, etc. (4), and 'other costs' (5). For each particular tax, a large number of cases can be used, but for all programmes together, only 700 cases remain. In order to calculate the full aggregate compliance costs of a firm, 79 cost items are needed. Of the total number of cost items needed to calculate aggregate compliance costs for all 1,053 firms, only 3.5 per cent is missing. It would be a waste not to use all available data, and discard all cases with one or more missing values. For this problem the following solution was found.

Table A.1 Number of cases for which compliance costs of firms can be calculated (no missing values)

Programme	n
Payroll taxes	934
Value added tax	921
Corporation tax	949
Personal income tax	980
Dividend tax	992
Excise duties	989
Environmental levies	943
Import duties	987
Property tax	853
Subsidy applications	1,040
Information supply on third parties	1,036
Aggregate compliance costs	700

As explained in section 5.1.1, the sample is stratified by sector of economic activity and by number of employees, because, with the results of earlier research in mind, it was expected that these variables are related to the level of compliance costs. If, in our sample, compliance costs are indeed strongly related to economic sector and number of employees, we may assume that strata of the sample are homogenous with respect to compliance costs. Then, stratum means of variables may be used as proxies of missing values. Applying this procedure assumes that missing values are not related systematically to certain types of firms. The missing

of data is then considered as completely accidental. We can make this assumption because the missing data are in fact distributed fairly evenly over sample strata.

In section 5.2.3 it is concluded that compliance costs *are* in fact related to economic activity and number of employees. Moreover, we find that *within* size groups of firms the relationship between compliance costs and number of employees virtually vanishes. Therefore, we decided to use the mean values of the variables in each stratum to substitute missing values. This procedure does not affect stratum means. The calculation of (weighted) overall means is straightforward. However, this is not the case with the calculation of the variances of these means.

The variance of the mean of variable x in a stratum with substituted missing values is

$$\frac{\Sigma^{n+m}(x_i-\bar{x})^2}{n+m-1} = \frac{\Sigma^{n}(x_i-\bar{x})^2 + m(\bar{x}-\bar{x})^2}{n+m-1} = \frac{\Sigma^{n}(x_i-\bar{x})^2}{n+m-1}$$

where n is the number of known values and m is the number of missing and filled-in values. The true variance of the stratum mean,

$$\frac{\Sigma^{n}(x_i-\bar{x})^2}{n-1}$$

is thus underestimated by a factor of (n-1)/(n+m-1). This can be redressed by multiplying the calculated variances by (n+m-1)/(n-1). As missing values are distributed fairly evenly over all strata, it suffices to correct the weighted overall means in this way.

Now, weighted mean compliance costs can be calculated in two ways. Based only on the 700 respondents who fully completed the questionnaire, weighted mean aggregate compliance costs amount to Gld 12,880 per firm. Based on 1,053 respondents and substituting stratum means for missing data, weighted aggregate compliance costs averaged Gld 12,380, which is only 4 per cent less. The sensitivity of this cost figure was tested by increasing all stratum means used to substitute missing values by 1 per cent. This resulted in a negligible increase of weighted mean aggregate compliance costs by only 0.09 per cent, to Gld 12,400.

A1.4 Time valuation

In order to convert hours spent on compliance work into (monetary) costs, time has to be valued. Hours sacrificed by the owner/manager have been valued using the answer to question 6a, that is, at the value reported by the respondent. Time spent by the spouse or other unpaid family members is valued at half this figure. The reply to question 9d indicates the value of staff time. How results depend on these assumptions is discussed in section 5.3.1.

A1.5 Number of employees

The number of employees is not asked for directly in the questionnaire; it is derived from the number of annual wage tax statements and the number of employees entering and leaving the firm (question 9a). The number of annual wage tax statements equals the number of employees from which wage tax is withheld in a particular year, that is, the *total* number of persons employed during that year. The *average* number of employees was calculated as the mean value of the number of employees at the beginning of the year (number of annual wage tax statements minus number of employees entering the firm) and the number of employees at the end of the year (number of annual wage tax statements minus number of employees leaving the firm).

A drawback of this approach is that in a few cases wage tax is withheld from pensioners as well. Counting pensioners as employees was avoided by checking with the answer to question 4 (labour costs).

In several cases where question 9a had not been answered, the size class (number of employees) could be derived from total labour costs (question 4).

The data base from which the sample was drawn uses a slightly different definition of 'employees'. The Chambers of Commerce register the number of employees (whether or not including the owner/manager) who work at least 15 hours a week. In practice, this number is almost equal to the average of the number of employees at the beginning and at the end of the year.

A2 Estimating the value of cash flow benefits

This appendix details the calculation of cash flow benefits for firms in 1989 (section 5.6.1).

VAT

The difference between VAT collected from customers and VAT paid on purchases is handed over to the Tax and Customs Administration on a monthly, quarterly or annual basis. For small firms, which in net terms pay less than Gld 1,000 a year to the Tax and Customs Administration, the collection period is the full calender year. Payment is then due before April 1st of the next year. Assuming a smooth flow of payments and receipts during the year, constant stocks and payment at the last possible moment, the average holding period of tax money is nine-twelfths of the annual VAT payment: six-twelfths for the collection period and three-twelfths for the 'grace period' between the end of the collection period and the day when payment is finally due.

Firms that pay between Gld 1,000 and Gld 36,000 in net terms annually, are required to pay on a quarterly basis. In this case, the grace period is one month. The average holding of VAT is 2.5-twelfths of the annual payment: 1.5-twelfths for the collection period and one-twelfth for the grace period.

Firms that usually owe more than Gld 36,000 VAT annually, and firms that are reputedly bad debtors, must file monthly returns. Payment is due within one

month after the collection month. These firms may hold an average of 1.5-twelfths of their annual VAT payments.

Firms entitled to a tax rebate may send in their monthly returns within the next following month. Repayment is usually within several weeks. In fact, the Tax and Customs Administration claim to provide the tax rebate within one month, every 95 out of a hundred times. Assuming that negative returns are made immediately after each month and repayment is made after one month, the loan *to* the treasury amounts to 1.5-twelfths of the annual VAT repayment (still assuming a smooth cash flow and constant stocks).

Unfortunately, the proportions of total VAT revenue paid monthly, quarterly and annually are not exactly known. The size of the cash flow benefit of VAT can, however, be estimated, using data on the number of firms filing on a monthly, quarterly or annual basis. See table A.2.

Table A.2 Estimation of the value of cash flow benefits of VAT

Collection period	Number of firms	Average payment (Gld)	Total payment (Gld m)	Benefit (Gld m)	Value (Gld m)
Year	48,746	500	24	18	1
Quarter	311,719	18,500	5,767	1,201	88
Month	152,051	195,619	29,744	3,718	273
Total			35,536	4,937	362

Sources: column 2 (number of firms): private communication Tax and Customs Administration; other columns: see text.

Average VAT payment on annual returns (annual payment less than Gld 1,000) is put here at Gld 500, and on quarterly returns (annual payments between Gld 1,000 and Gld 36,000) at Gld 18,500 (Table A.2, column 3). As total VAT receipts amount to Gld 35,536m, the average payment on monthly returns must be Gld 195,619 (including tax rebates). By multiplying the number of firms by average annual payment, we can derive the total annual payment for each collection period. Now we can calculate cash flow benefits. For all firms together they amount to almost Gld 5bn.

The value of this interest-free loan depends on the going rate of interest. We have used the average of one-month and three-month inter-bank rates, which at the time (1989) was 7.33 per cent. The resulting value of aggregate cash flow benefits is Gld 360m, about 17 per cent of compliance costs. This is the amount the public treasury missed out on, because the private sector had temporary use of VAT payments.

Evidently, this is no more than a rough estimate. The available data do not allow a better assessment. The assumed annual VAT payment of firms filing quarterly is probably an under-estimation. Some of these firms file negative returns, and for most of the others the annual payment will be closer to Gld 1,000 than to Gld 36,000, according to information obtained from the Tax and Customs Administration. However, had we taken Gld 10,000 instead of Gld 18,500, the value of the cash flow benefit would have been reduced by no more than Gld 16m

(4 per cent of total value), as can be calculated from table A.2. This difference is negligible.

Excise duties

In 1989, excise duties were ruled by six different laws. Moments of payment to the Tax and Customs Administration differed considerably. Contrary to VAT, the moment of payment of excise duties is not related to the moment products reach the consumer - the intended taxpayer. This fact complicates the calculation of cash flow benefits. Only a maximum value may be computed. In the case of excise duties on mineral oils, alcohol, non-alcoholic beverages, sugar and wine, we assume that products reach the consumer the moment they leave bond (and duties become payable). In reality this takes a little longer, which is why the actual value of cash flow benefits is lower than the maximum value presented here.

For excise duties on mineral oils, alcohol and non-alcoholic beverages, the collection period is one month and the grace period 15 days. Again assuming a smooth cash flow, constant stocks and payment on the latest permitted date, the maximum value of average cash flow benefits amounts to one-twelfth of annual tax payments, or Gld 512m.

Excise duty on sugar is paid on the 20th day of the second month following the month the goods leave bond. In 1989, the resulting cash flow benefit was less than Gld 9m.

For wine duty the collection period is three months and the grace period one month, which resulted in a cash flow benefit of Gld 41m at most.

In the case of tobacco and beer, the cash flow benefit depends on the production process. Excise tax on tobacco products is paid on the last day of the third month following the month stamps are requested; beer tax is due on the 20th day of the third month following the month fermentation started. The period between the moment duties become payable and the moment the goods are sold will differ between firms. Here we assume the cash flow benefit to be 1.5-twelfths of annual tax payments, resulting in Gld 257m for excise duty on beer and Gld 70m for excise tax on tobacco.

Cash flow benefits, generated by all excise duties together, could amount to anything up to Gld 900m. Assuming an interest rate of 7.33 per cent, the maximum value of this interest-free loan would have been about Gld 66m. It would be impossible to indicate how much the actual value lies below this maximum.

Payroll taxes

Wage tax and general social insurance contributions are collected from employees and then handed over to the Tax and Customs Administration. Here it is assumed that wages are paid on the final day of every month, and that average pay is constant during the year. The fact that some employees are paid weekly is ignored, because no data on pay schedules are available. Also ignored, is the fact that wages are usually paid during the last week instead of on the last day of the month. Consequently, actual benefits will be somewhat larger than they are estimated here.

Apart from a few exceptions, wage tax and social security contributions are paid quarterly or monthly. If the quarterly amount is below Gld 9,000, taxes are

paid every quarter. The grace period is one month. Thus, the average cash flow benefit amounts to two-twelfths of the annual tax payment. If the quarterly tax payment is over Gld 9,000, provisional payments of 30 per cent of the amount due for the the quarter before the previous quarter must be made monthly. That results in cash flow benefits equal to one-twelfth of the amount paid provisionally, plus two-twelfths of the amount paid at the end of the quarter. The average interest-free loan is 0.9 x 1/12 + 0.1 x 2/12 = 1.1/12 of annual payroll tax payments.

Employers who choose to do so, or who are reputedly bad debtors, pay taxes monthly. They enjoy an average cash flow benefit equal to one-twelfth of annual payments.

In 1989, Gld 60bn was paid on a monthly basis[147]. However, part of this amount was paid by the government sector which collects payroll taxes from civil servants. Payroll taxes collected from the government sector are estimated at Gld 18,8bn [Allers 1990b, p. 40]. We assume that this amount is paid on a monthly basis. This leaves the amount paid monthly by the non-government sector at 60 minus 18.8 = Gld 41.2bn a year. See table A.3.

Table A.3 Estimation of the value of cash flow benefit of wage tax and general social insurance contributions (Gld m)

Payment period	Annual payment	Loan part	Benefit	Value
Monthly	41,242	1/12	3,437	252
Quarterly + provisional	25,652	1.1/12	2,351	172
Quarterly	3,348	1/6	558	41
Total			6,346	465

Sources: see text

Employers, who made quarterly returns, paid Gld 29bn in 1989. Provisional payments were made by 46,000 out of 232,000 quarterly tax payers[148]. The average annual payment of employers making no provisional payments is estimated at Gld 18,000 (Gld 4,500 each quarter; provisional payments are required if the quarterly tax payment exceeds Gld 9,000). Taken together, these employers paid 18,000 x 186,000 = Gld 3.3bn in 1989. Thus, employers making provisional payments paid 29 minus 3.3 = Gld 25.6bn.

Now the resulting cash flow benefit may be calculated (table A.3). In 1989 it amounted to approximately Gld 6.3bn. At an interest rate of 7.33 per cent, this interest-free loan was worth Gld 465m.

Admittedly, this estimate is, again, a rough one. The assumed average annual payment of employers who make monthly returns of Gld 18,000 is probably too low. However, an increase to Gld 24,000 results in additional cash flow

[147] Source: private communication Tax and Customs Administration.

[148] Source: private communication Tax and Customs Administration.

benefits worth only Gld 7m (1.5 per cent of total value), which is a small amount in relative terms.

Employees' social insurance contributions are paid monthly, in advance, to the industrial insurance board *(bedrijfsvereniging)*. At the end of each year, a final settlement is made. It is assumed here, that the total amount paid in advance equals the total amount to be paid in the year, and that wages are paid on the last day of the month. In fact, this implies that employers supply an interest-free loan to the industrial insurance boards amounting to one month of tax payments. In 1989, the resulting cash flow losses to employers amounted to about Gld 2.9bn. At 7.33 per cent interest, the costs to employers were Gld 220m.

All payroll taxes together resulted in cash flow benefits to the private sector of approximately Gld 3.4bn. At 7.33 per cent interest, such benefits may be valued at Gld 250m, or 8 per cent of compliance costs.

A3 Determining sample size and structure

The sample was stratified in such a way that the same relative standard deviation of mean compliance costs could be expected in every subsample, assuming an equal response rate and coefficient of variation in every subpopulation. Using the customary 2-sigma confidence interval, this means that, in every subsample, there is a 95 per cent chance that the relative deviation of subsample mean $\bar{x}_i$ from the (unknown) population mean $\bar{X}_i$, does not exceed a fraction p_i (assuming a reasonably normal distribution of $\bar{x}_i$, which is the case if each subsample is sufficiently large). Or:

$$\left|\frac{\bar{x}_i - \bar{X}_i}{\bar{X}_i}\right| \leq p_i \qquad (1)$$

with a probability of 95 per cent. Also with a probability of 95 per cent,

$$|\bar{x}_i - \bar{X}_i| \leq 2\sigma_i \qquad (2)$$

where σ_i is the standard deviation of $\bar{x}_i$. The size of the i-th subsample should be chosen in such a way that

$$p_i \bar{X}_i = 2\sigma_i \qquad (3)$$

The variance of the i-th subsample mean, σ^2_i, can be calculated from S^2_i, the variance of the i-th subsample:

$$\sigma_i^2 = \frac{(N_i - n_i)}{N_i} \times \frac{S_i^2}{n_i} \tag{4}$$

N_i is the size of the i-th subpopulation; n_i is the size of the i-th subsample. From (3) and (4) it follows that:

$$n_i = \frac{N_i a}{N_i + a}\ ; \qquad a = \frac{4}{p_i^2} \times \left(\frac{S_i}{\overline{X}_i}\right)^2 \tag{5}$$

From (5) the size of every subsample may be calculated. N_i is known from the database of the Chambers of Commerce. We choose the permitted relative deviation p_i (with a probability of 95 per cent). S_i/X_i however is unknown. This is the coefficient of variation in the i-th subpopulation. If x_{ij} are the sample values, then

$$\overline{x}_i = \frac{\Sigma_j\, x_{ij}}{n_i} \tag{6}$$

is an unbiased estimator for $\overline{X}_i$. An unbiased estimator for S^2_i is s^2_i, the variance in the i-th subsample:

$$s_i^2 = \frac{\Sigma_j\, (x_{ij} - \overline{x}_i)^2}{n_i - 1} \tag{7}$$

Only two compliance cost studies were known to report the standard deviations of results: Yocum [1961] and Sandford et al. [1981]. Although these studies differ considerably from our study, the variation coefficients found by Yocum and Sandford et al. were used to indicate the magnitude of $s_i/\overline{x}_i$: 0.8 seemed to be rather on the safe side.

The estimators for (total) population mean and the variance of the mean are:

$$\overline{x} = \frac{\Sigma_i\, N_i \overline{x}_i}{N} \tag{8}$$

$$\hat{\sigma}^2 = \Sigma_i \frac{N_i}{N^2} \times (N_i - n_i) \times \frac{s_i^2}{n_i} \tag{9}$$

N is the population size.

Seven size classes and eight economic sectors are distinguished. Thus, 56 subsamples result. However, some are empty or contain only a few firms. After combining these, 46 strata remain, each containing at least 100 firms. Presupposing a response rate of one-third, every subsample must have three times the size computed from (5). We choose a permitted relative deviation of the results (p_i) of one quarter.

Unfortunately, the database of the Chambers of Commerce does not permit taking samples of arbitrary size. The sampling fractions must be whole numbers. Therefore, subsamples differ slightly from the 'ideal' size as calculated from (5).

The method followed here leads to an over-representation of large firms in the sample. But otherwise, no significant results can be expected for this group. We had also to consider is that compliance costs of large firms are probably higher (although perhaps not proportionally so), which makes this group extra important when calculating the overall mean.

Our assumptions, regarding the response rate and the coefficient of variation, turned out to be rather optimistic. The overall response rate was 20 rather than the expected 33 per cent. Small firms showed a lower response rate than large firms. The coefficient of variation of aggregate compliance costs per stratum ranged from 0.4 to 2.1. The all-strata mean was 1.0, which exceeded the expected value of 0.8.

Table A.4 Population of firms

Number of employees	Economic sector (a)								
	1	2	3	4	5	6	7	8	Total
0-4	29,506	26,492	155,588	35,260	10,443	18,818	144,315	56,589	477,011
5-9	4,832	5,408	18,850	3,013	1,781	2,686	7,255	5,341	49,166
10-19	4,199	3,835	7,880	855	920	1,897	4,165	3,064	26,815
20-49	3,809	2,830	3,966	377	337	1,342	2,943	3,040	18,644
50-99	1,590	799	934	74	45	425	917	1,407	6,191
100-499	1,434	394	446	46	6	236	550	1,102	4,210
500+	196	8	23	2	-	21	77	212	539
Total	45,566	39,766	187,687	39,627	13,532	25,421	160,222	70,755	582,576

Source: Private communication Chambers of Commerce.

(a) Classification of economic sectors:

1 Manufacturing, mining
2 Construction, installation
3 Trade
4 Hotels, catering
5 Repair shops
6 Transport, communication
7 Banks, insurance, commercial services
8 Other services

Table A.5 Sample of firms

Number of employees	Economic sector (a) 1	2	3	4	5	6	7	8
0-4	123	124	123	123	120	124	125	118
5-9	116	121	120	119	119	119	119	125
10-19	126	124	118	122	115	125	120	116
20-49	123	122	117	120	|	118	119	129
50-99	123	114	114	|	|	103	111	118
100-499	121	|	|	| 78	113 |	|	|	|
		107	124	|	|	93	108	119
500+	95	|	|	|	|	|	|	|

Total: 5,393.
(a) See note table A.4.

Appendix B

Review of earlier studies on operating costs

The following two tables (B.1 and B.2) summarise all earlier studies on compliance and administrative costs of tax-benefit programmes that the author is aware of. Similar tables, covering studies in the English language only, are published before (Neeld [1962, pp. 427-428], Vaillancourt [1987, pp. 400-410 and 1989 pp. 6-11 and 14-16], Pope [1989, pp. 140-141], and Sandford et al. [1989. pp. 224-230]). The purpose is to give the reader an impression of the work which has been done on the subject (methods used, scope of study), and, secondly, to provide a summary of outcomes. Obviously, only a very brief description of both research methods and outcomes can be given here. Because methods, definitions and scope of the available studies differ greatly, it will be necessary to refer to the original studies before any conclusions may be drawn from the results as summarised here. Complete references may be found in the bibliography of this book.

Compliance cost studies are limited to taxation; no earlier studies of compliance costs of subsidies or benefits are known to the author. Studies of administrative costs include some covering benefits and subsidies. Some degree of arbitrariness is inevitable as to the decision which publications should be included in this annex. Statistical publications of administrative bodies (e.g. annual reports of revenue departments) are excluded from table B.2, as are publications which merely mention figures from official publications without much further analysis. Table B.1 contains all known studies on compliance costs, including estimates, provided they are based on something more than a rough guess (which excludes e.g. Nouwen [1968], Pen [1980], Vuchelen [1985], De Kam [1988]). Thus, the included studies on compliance costs range from informed guesses to thorough studies.

Table B.1 Studies on compliance costs.

Reference (a) and Method	Taxes (b), Year (c) and Respondents studied	Number of Respondents, (Response rate)	Main Results
Haig [1935], postal survey	All taxes, 1934, large US firms	163 (10%)	Aggregate cost ratio 2.3%. Considerable variation. Non-uniformity of State taxes causes high compliance costs.
Hofstra [1943-44], guesstimate based on data from a few large employers	Wage tax, employers in the Netherlands	.	Compliance costs considered low; Gld 1.5 (0.5) a year per employee receiving weekly (monthly) pay.
Martin [1944d], case studies, guesstimates based on Haig [1935]	All taxes, 1939-41, USA corporations	5 (.)	Big differences in compliance costs. Average cost ratios estimated between 0.3% and 3.2%.
Edelmann [1949], case study	New York City sales tax, variety store	1	Compliance cost ratio 5.8%.
May and Thompson [1950], postal survey	All taxes, USA manufacturing companies	125 (.)	Compliance costs amounted to 0.1% of sales or 1.5% of taxes paid for the average company.
IFO [1953], case studies	PIT, CIT, sales tax, wage tax, 1952, W-German firms	.	Minimum estimates of cost ratios: PIT 26%, wage tax 4%, CIT 5% and sales tax 5%.
Oster and Lynn [1955], case studies	Ohio axle mile tax, 1953, Ohio trucking companies	11 (61%)	Compliance cost ratio between 2 and 104%; weighted mean 18.6%.
Matthews [1957], case studies	Utah sales tax 1956, retail stores	7 (.)	Compliance cost ratios ranged from 2.8 to 12.6%; average 5.4%. Average transaction size and firm size negatively related to costs.
Kust [1959], case study	USA CIT, Westinghouse	1	Compliance cost ratio 7 per cent. Inter-state differences boost costs.
Mathes and Thompson [1959] (a), postal survey	All taxes, USA manufacturing companies	222 (.)	Compliance costs appeared to be increasing and this trend was likely to continue.
Yocum [1961], case studies	Ohio sales tax, 1959, retail stores	526 (.)	Average cost ratio 14.8 per cent. Small firms are relatively heavily burdened.
Bryden [1961], postal survey	Canadian taxes, corporations supporting Can. tax foundation	125 (25%)	Compliance costs high for small firms; high variability, even between firms of same size and industry.

Johnston [1963], case studies	Federal CIT, 1960, corporate manufacturers in Ohio	6 (.)	Compliance cost ratios between 0.1 and 3.2 per cent. Ratios decrease with firm size.
Mueller [1963], postal survey and follow-up case studies	Taxes collected from third parties, small firms in Washington State	survey 198 (80%) follow-up 75 (75%)	Costs are regressive. Wage tax costs 9.3 hours per employee. Sales tax costs are 0.5% of turnover.
Wicks [1965], postal survey	Montana PIT, parents of students	106 (33%)	Mean cost ratio 32%; median 7%. Non-respondents incurred lower costs. Self-employed burdened most.
Wicks [1966], postal survey	Federal PIT, Montana residents, parents of students	118 (31%)	Mean cost ratio 11.5%, median 3%. Non-respondents had fewer problems with compliance. No relationship between costs and tax liability.
Strümpel [1966a or 1966b], survey by commercial institute	All taxes, 1963, W-German self-employed employing no more than 100	1009 (.)	Owners spent 18 hours, staff 4 hours monthly on average; average fee to tax consultant DM 58 monthly. Compliance costs are regressive.
Wicks and Killworth [1967], postal surveys	State and local taxes in Montana, individuals and firms	indiv.: 421 (42%) employers: 74 (.) other firms: small scale	PIT cost ratio 29% (taxpayers 20.7, employers 8.3%). Costs varied considerably between taxpayers.
Schmidt [1968], survey	VAT 1968, W-German firms	200 (.)	Compliance costs increased by 16% after change from turnover tax to VAT in 1968.
Niehus [1969], poll by Chambers of Commerce	VAT 1968, W-German firms	.	Change from turnover tax to VAT in 1968 increased compliance costs, according to 66-70% of respondents.
Neuhoff [1969], interviews	Payroll taxes 1968, W-German employers	26 (.)	Costs per employee decrease with size. Compliance cost ratio 3.75%, administrative costs 0.52%.
Ott and Ott [1969], estimate based on paid preparer's rate schedule	PIT 1964, USA	-	Compliance costs approximated at $1.3bn.
EIM [1970], survey of accounting and bookkeeping offices	VAT, PAYE 1969, small and medium-sized business in the Netherlands	49 (.) accounting offices supplied data on 6085 firms	Compliance costs contracted out differ between industries. Costs of VAT exceed those of PAYE.
Bund der Steuerzahler [1972], postal survey	All taxes, members of taxpayer pressure group (firms) in W-Germany	1200 (.)	Total costs DM 7.2bn. Costs per employee decrease sharply with firm size. Representativeness of sample doubtful.
Barker [1972], simulation based on case studies	Hypothetical VAT in USA; Indiana firms	6	Compliance costs range from 0.004 to 0.68 per cent of turnover.

Sandford [1973], opinion poll interviews and postal survey (follow-up)	UK personal taxes, 1970, personal taxpayers, follow-up: high compliance costs taxpayers	2773 (78%) 137 (41%) follow-up	Compliance costs are regressive and especially burdensome for self-employed. Total operating costs amounted to £200-300m, 3.9-5.8 per cent of revenue.
Parker [1976], simulation based on case studies	2 hypothetical VATs in USA, non-retail firms	6	Costs are less than 1 per cent of sales. No major changes needed in firms' administration procedures.
Godwin [1976], interviews	UK VAT 1973-74, independent retailers in Bath	29 (44%)	Compliance costs related to tax rates on goods sold. Cost ratio especially high for chemists because of zero-rating.
IHK [1976], postal survey	Government regulations, firms near Koblenz (W-Germany)	29 (.)	Sample not representative. Costs of compliance with regulations (incl.transfers) regressive.
Commission on Federal Paperwork [1977], guestimate	USA PIT, 1977	-	Compliance costs $54 per taxpayer; total compliance costs $4.6bn.
Hamer [1979], postal survey	W-German government regulations, firms (95% < 100 empl.)	365 (62%)	Compliance costs of taxes (excl. payroll) about DM 12,000 per firm. Compliance costs are regressive.
Franke [1980], postal survey	All taxes, firms in southern Niedersachsen (W-Germany)	19 (22%)	Only seven questionnaires completed fully and consistently - too little for meaningful analysis.
Klein-Blenkers et al. [1980], interviews	Government regulations, manufacturers in Nordrhein-Westfalen (W-Germany)	100 (.)	Compliance costs estimates by firms themselves are 50% of actual costs. Compliance costs are regressive.
Smith and O'Brien [1981], guestimate	PAYE, VAT, Ireland	-	The authors stress the regressive impact of compliance costs.
Snijder [1981], interviews	Payroll taxes, VAT, PIT, CIT 1979, Dutch small and medium-sized firms	366 (.)	Compliance costs relatively higher for small firms. PAYE most expensive, followed by VAT.
Sandford et al. [1981], postal survey, follow-up interviews	UK VAT 1977/78, registered traders	2799 (31%)	Total compliance costs £400m, average £300 per firm. Costs are regressive; large firms benefit most from use of funds.
Bund der Steuerzahler [1981], survey in magazine	German government regulations, firms subscribing to Der Steuerzahler	403 (.)	Sample not representative. Compliance costs are regressive.

Peat, Marwick, Mitchell [1982], postal/telephone survey, case studies	Sales and Use taxes, retailers in seven USA States	survey: 80 (30%) case studies: 18 (.)	Compliance cost ratios between 2.0 and 3.7 per cent. Cash flow benefit 25-40% of costs. Small firms incur relatively high costs, but also benefit most from use of funds.
Godwin et al. [1983], postal survey	PAYE, UK 1981/82, employers	. (30%)	Compliance costs are regressive. Total operating costs amounted to £850m; cost ratio 2% (compliance costs £450m; 1%).
Ace-Resultants [1984], postal survey	Dutch government regulations, 1984, members of business organisation	7 (78%)	Sample not representative. Regressiveness of compliance costs confirmed.
Täuber [1984], magazine survey	All taxes, small and medium-sized retailers in W-Germany	373 (3.7%)	Mean costs DM 42,000 per firm. VAT most expensive to administer. Compliance costs are regressive.
Slemrod and Sorum [1984a or b], postal survey	Fed. and State PIT 1982, Minnesota taxpayers	600 (33%)	Compliance takes 27 hours plus $61 for the average taxpayer. Cost ratio 5-7%. High costs for self-employed.
Rozendal [1985], survey	PIT 1984, taxpayers in the Netherlands	761 (60%)	Own time spent on tax return three hours on average.
Hunkeler [1985], postal survey	Swiss (federal) government regulations, 1983, manufacturers with less than 200 employees	231 (34%)	Compliance costs are regressive; variation greatest among small firms. Mean labour-related compliance costs Fr 9,100; tax-related Fr 9,900.
Sandford and Morrissey [1985], study of client records of accounting firm	Irish wealth tax, 1975-77	142	Compliance costs £352 per taxpayer per year.
Department of Trade and Industry [1985], interviews	Costs of government regulations, including taxes, UK firms with max. 200 employees	200 (.)	VAT causes highest costs. Overall compliance costs probably do not exceed those incurred abroad.
Leonard [1986], postal survey	Payroll taxes in Ireland, 1983, members of employers' organisation	119 (40%)	Compliance costs are regressive. Overall cost ratio 5.7 per cent.
Tiebel [1986], opinion poll interviews of individuals, magazine survey of firms	Personal taxation and government regulations concerning businesses, Western Germany	indiv.: 1933(d) (.) firms: 444 (.)	Average compliance costs of taxation 11 hours and DM 217 per household, DM 30,500 per firm. Total about DM 40bn. Costs are regressive. For firms, VAT is most expensive.

Bannock and Peacock [1989], postal survey	VAT in W-Germany and UK, 1986, members of business organisation (W-Ger.) and subscribers to business magazine (UK)	W-Ger.: 197 (25%) UK: 262 (44%)	Compliance costs as percentage of turnover decrease with firm size. Costs seem to be higher for German firms, but significance is not clear. Composition of samples different.
Arthur D. Little [1988], postal survey and diary study	USA federal taxes 1983, individuals and businesses	ind. 3,831 (62%) firms 1,474 (37%)	Time per individual: 20-32 hours; per firm 640 hours. Total time spent 4,342m hours (individuals 1,594, firms 2,748m hours).
Pitt and Slemrod [1988], estimate based on IRS file	Itemising PIT deductions, 1982, USA	13,409 tax returns	Costs of itemising deductions $1.44bn, 5-7% of total compliance costs.
Sandford et al. [1989], postal surveys + update earlier studies	UK taxation, 1986/87, personal taxpayers, firms	pers 1,776 (43%) VAT 680 (24%)	Total operating costs £5bn. Compliance costs are twice as high as administrative costs. Compliance costs are distributed very unevenly.
Vaillancourt [1989], omnibus face-to-face survey, postal survey (firms)	PIT, PAYE, Canada 1986, personal taxpayers, employers	pers. 1,673 (.) empl. 385 (10%)	Operating costs $5.5bn, 7% of revenue. Compliance costs 86% of total. Compliance costs are distributed unevenly.
Pope et al. [1990], postal survey	PIT Australia, 1986/87, registered voters	1,098 (16%)	Total compliance costs $3-4bn, 8-11 per cent of revenue. Average 11 hours and $144 per taxpayer.
NIPO [1991], computer survey	PIT 1990, the Netherlands	705 (.)	Average time spent on tax return three hours, average money costs Gld 44.
Leerstoel marktbeleid [1991a], telephone survey	Government regulations, Dutch small and medium-sized firms	601 (57%)	Methodologically weak. 71 per cent of respondents never have any problems with compliance.
Pope et al. [1991], postal survey	Income taxation 1986/87, Australian public companies	314 (17%)	Compliance costs are estimated between $646 and $1,341, 11.4-13.7% of revenue. Small companies are burdened most.
Blumenthal and Slemrod [1992], postal survey	PIT 1989, Minnesota taxpayers	708 (43%)	Average USA taxpayer incurs compliance costs of 27 hours plus $66.
Bosch et al. [1992], simulation based on interview data	Proposed changes in levying PAYE in the Netherlands, employers	32 (.)	Both compliance and administrative costs may be reduced by harmonising tax bases and report procedures and streamlining the administration of insured.

Sandford and Hasseldine [1992], 2 postal surveys: payroll and other taxes	Centrally imposed business taxes in New Zealand, 1990/91, businesses	payroll 1,887 (31%) other 2,954 (31%)	Compliance costs are high (overall costs \$1.9bn, 2.5% of GDP) and very regressive.
Cléroux [1992], postal survey	Goods and Services Tax, 1991/92, members of business organisation, Canada	10,123 (15%)	Gross compliance costs amounted to \$4.76bn, 26% of revenue. Cash flow benefit: 4% of compliance costs. Small firms are burdened most.
Pope et al. [1993a], postal survey	Wholesale sales tax, 1990/91, Australian businesses	593 (24%)	Compliance costs \$179, 1.9% of revenue. Costs are regressive. Cost ratio falls from 24% (smallest firms) to 0.1% (largest firms).
Pope et al. [1993b], postal survey	Employment-related taxation, 1989/90, Australian firms	745 (27%)	Relatively high burden on small firms. Compliance costs of PAYE and (State/Territory) Payroll Tax combined amount to 1.7% of revenue (PAYE alone 1.4%).

(a) References may be found in the bibliography. The one exception is Mathes and Thompson [1959]: S.M. Mathes and G.C. Thompson, 'The high costs of compliance', Business Record, August, pp. 209-214 (quoted in Neeld [1962, pp. 415-16], Vaillancourt [1989, p. 8] and Sandford et al. [1989, p. 224]).
(b) A list of abbreviations may be found in appendix D.
(c) If stated in study.
(d) Including non-taxpayers in sample.

Table B.2 Studies on administrative costs

Reference	Tax-benefit programmes and year studied	Method	Main Results
Reynolds [1937]	Various state and local taxes, USA, 1918-1935	Review of the literature	The available data are very incomplete and unreliable.
Martin [1944b]	All federal, state and local taxes, USA, 1941	Postal survey of tax collection agencies; guesses	Administrative procedures rather inadequate for cost studies; cost ratio 0.89% (federal), 1.5% (state & local).
Zimmerman [1955]	Syracuse sales tax (USA), 1953	Case study	Administrative costs amounted to $56,896.65, 1.44% of revenue.
Maloon and Oster [1957]	State sales tax, USA, 1955	Survey of 19 leading sales tax states (response: 12)	Cost ratio between 0.85% and 3.82%. High cost states employ more field examiners, thus a low cost ratio does not imply efficiency.
Neeld [1962]	Major USA state taxes, 1960	Postal survey	Cost ratio between 0.5% and 3.5%.
Michel [1962]	Federal, regional and local taxes, Switzerland, 1958	Based on official sources	Very detailed account of costs of particular taxes; no totals are given. Costs are said to be low.
Wicks and Killworth [1967]	State and local taxes in Montana, USA	Accounting data and questionnaires	Cost ratio varied between 0.04% (cigarettes) and 9.2% (chain stores).
Neuhoff [1969]	Wage tax, Western Germany, 1960-68	Estimates based on published data	Cost ratio fell from 0.86% to 0.52%. Only staff costs included.
Goetschius and Wicks [1971]	Nine state transfer programmes in Montana, USA, 1967	Accounting data supplied by agency officials	Cost ratio 1-2%, except general relief (13.4%) and unemployment benefit (9.4%,). High ratios caused by low level of payments (relief) or high caseload flow, complexity and frequency of payment and contact (unemployment benefit).
Wolfe [1972]	Taxes in renaissance France, about 1600	Multiplication of number of fiscal agents with official compensation	Collection costs amounted to one-fourth or more of revenues.
Sandford [1973]	Taxes levied by the British Inland Revenue, 1961/62-1970/71	Figures from annual report Inland Revenue	Cost ratio varied between 1.39% and 1.63%. Labour costs accounted for 85% of the total.

Dean [1976] (based on Dean [1975], but containing more cost figures)	Taxes levied by the British Inland Revenue, 1965/66-1974/76	Calculation based on data from annual report	Total administrative costs amounted to £250m in 1974/76, 1.75% of revenue. Official figures suffer from many shortcomings.
Meade [1978]	British social security benefits, various years	Data from various sources	Cost ratio of universal benefits about 4%; of means-tested benefits 5-15%.
Mendelson [1979]	Six income security programmes in Canada, 1960-1976	Analysis of official sources (published and unpublished)	Mean cost ratios vary between 0.43% and 13.2%. Means-test increased costs. Cost-saving potential seems rather limited.
Sandford et al. [1981]	VAT, UK, 1977/78	Published data and business survey	Cost ratio 2.0%. Costs exceeded revenue in lowest size groups (comprising over 40% of firms).
Due and Mikesell [1983]	State sales tax, USA, 1959/60, 1969/70 and 1979/81	Data compiled from information provided by the states	Average cost ratio 0.73% in 1979/81 (range 0.3-1.68%); 0.19% per 1% of tax rate.
Sandford and Morrissey [1985]	Irish wealth tax, 1975-1978	Estimate based on official figures	Cost ratio estimated at 14 per cent.
RGF [1985]	National Assistance, the Netherlands, 1981, 1982 and 1983	Based on accounts of 88 municipalities of all sizes	Costs per client fell from Gld 2,010 via Gld 1,650 to Gld 1,510, mainly because of rise of number of recipients.
Van der Drift et al. [1986]	Locally administered social security benefits, the Netherlands, 1983	Data from accounts of 47 large municipalities	Costs per client: Gld 1700 (some costs not related to benefits are included).
Leonard [1986]	Irish PAYE and pay-related social insurance, 1983	Based on official data	Total administrative costs £25m (PAYE £18m, PRSI £7m); 1.1% of revenue.
KPMG [1988]	Locally administered social security benefits, the Netherlands, 1983	Postal survey of 41 municipal social services	Costs per client: Gld 1,370 (including services other than benefit administration).
Bauer [1988]	W-German taxation, 1979, 1981, 1983	Calculated from official data of 2 states (Länder)	Total DM 5.6bn, 1.8% of revenue (1983). Cost ratio of most expensive tax 1,300 times as high as cost ratio of cheapest tax.
Sandford et al. [1989]	UK taxation, 1986/87	Data published by revenue departments	Overall cost ratio 1.16 per cent; PIT, CGT and social insurance contributions most expensive (1.5%).
Vaillancourt [1989]	Canadian PIT and payroll tax system, 1986	Calculated from official sources	Total administrative costs amounted to $770m, 1% of revenue.

RGF [1990]	Locally administered social security benefits, the Netherlands, 1986-1989	Based on budgets of 108 municipalities	Costs per client rose from 1,510 to 1,710, while the number of clients fell by 20 per cent.
SVr [1990, 1991a, 1992a, 1992b, 1992c, 1993]	Social insurances, the Netherlands, 1984 -	Based on data from administering bodies	Extensive cost analysis at very low level of aggregation; no conclusions reached yet (ongoing series).
MvF [1991b]	Various subsidies, the Netherlands, around 1990	Data from ministries	Available data is very incomplete; reliability of supplied figures seems questionable.
Kabel et al. [1992]	A number of Dutch transfer programmes, 1990	Data from ministries	Cost data is scarce, comparisons are difficult to make and efficiency measurement not (yet) possible.

Appendix C

Measures of association for contingency tables

Apart from testing the *significance* of the association between two variables forming a contingency table, by means of the Chi-square test, the *strength* of the association can be measured. To this end, many measures of association exist, for different types of tables, each of them with its own properties. Here, the interpretation of the measures used in the study is briefly discussed. These measures are non-parametric, which means no assumption is needed about the distribution of the variables. For greater detail the reader is referred to Everitt [1980, Ch.3].

Nominal-level variables

If the variables forming the contingency table do not have ordered categories, we can use Cramer's V and Lambda. *Cramer's V* is based on the Chi-square statistic. The magnitude of Chi-square depends on sample size, which makes it an inconvenient measure. Cramer's V makes a correction for n and the table size. Its value lies between 0 and 1; zero means independence and unity complete association. However, V has no clear probabilistic interpretation, which makes it difficult to assess a particular value of V.

Easier to interpret is *Lambda*, which also ranges from zero to unity. Lambda is the relative increase of our ability to predict the value of the dependent value, once the value of the independent variable is known. If Lambda is .25, information about the independent variable improves our ability to predict the dependent value by one quarter.

Ordinal-level variables

Dichotomies and variables with ordered categories are measured ordinally. When the contingency table is formed by ordinal-level variables, we can still use Cramer's V and Lambda, but both measures are calculated as if the variables were measured at the nominal level. Information about the order of categories is ignored. More appropriate measures are Kendall's Tau and Gamma. These statistics are based on a comparison of the ordering of categories of variables for all possible pairs of cases.

Kendall's Tau ranges from -1 to 1, zero meaning no association (the number of pairs with rankings on the two variables in the same direction equals the number of pairs with rankings in the reverse direction). A positive value indicates a tendency for the cases to fall near the main diagonal of the table: a higher value for one variable is likely to be matched by a higher value for the other. A negative value of Tau points to a negative relationship between both variables. Two Tau statistics are used in this study: *Tau B* is used with square tables, *Tau C* with rectangular tables. As with Cramer's V, the problem with Tau is that it has no obvious probabilistic interpretation.

This problem does not arise with *Gamma*, which may be interpreted as the probability that two variables for two randomly chosen cases are ranked in the same direction *minus* the probability that these are ranked in the reverse direction. If, for example, Gamma is .60, then the probability that for any pair of cases a higher value of one variable is matched by a higher value of the other, and a lower value by a lower, is 80 per cent, and the probability of a differing order for the two variables is 20 per cent. If the variables are independent, Gamma takes the value zero. By definition, gamma ranges from -1 to 1.

Appendix D

List of abbreviations

	Dutch	English
AAF	Algemeen Arbeidsongeschiktheidsfonds	General Disability Insurance Fund
ABP	Algemeen Burgerlijk Persioenfonds	Civil servants' pension fund
AAW	Algemene Arbeidsongeschiktheidswet	General Disability Benefits Act
ABW	Algemene Bijstandswet	National Assistance Act
AFBZ	Algemeen Fonds Bijzondere Ziektekosten	General Fund for Exceptional Medical Expenses
AKERs	Afdelingskassen en eigen-risicodragers	Employers administering sickness benefits
AKF	Algemeen Kinderbijslagfonds	General Family Allowances Fund
AKW	Algemene Kinderbijslagwet	General Family Allowances Act
AMP	Algemeen Militair Pensioenfonds	General military pension fund
AOF	Arbeidsongeschiktheidsfonds	Disability Insurance Fund
AOW	Algemene Ouderdomswet	General Old Age Pensions Act
AWBZ	Algemene Wet Bijzondere Ziektekosten	Exceptional Medical Expenses Act
AWF	Algemeen Werkeloosheidsfonds	General Unemployment Fund
AWW	Algemene Weduwen- en Wezenwet	General Widows and Orphans Act
AWWF	Algemeen Weduwen- en Wezenfonds	Widows and Orphans Benefits Fund
bn	miljard	billion
bv	bedrijfsvereniging	industrial insurance board
BZ	Bijstandsbesluit Zelfstandigen	Self-employed Assistance Decree
CBS	Centraal Bureau voor de Statistiek	Central Bureau of Statistics
CGT	Kapitaalwinstbelasting	Capital Gains Tax
CIT	Vennootschapsbelasting	Corporation Income Tax
d.f.	graden van vrijheid	degrees of freedom

DIR	Dienst Investeringsrekening	Government agency which used to administer e.g. the INSTIR programme
DM	Duitse mark	Deutschmark
DOB	Dienst Omroepbijdragen	Agency levying radio and TV licence fees
ECU	Europese munteenheid	European Currency Unit
EDI	Electronische gegevensuitwisseling	Electronic Data Interchange
EIM	Economisch Instituut voor het Midden- en kleinbedrijf	Research Institute of Small and Medium-Sized Business
EU	Europese Unie	European Union
EZ	Ministerie van Economische Zaken	Ministry of Economic Affairs
GAK	Gemeenschappelijk Administratiekantoor	Joint Administration Office
GDP	Bruto binnenlands product	Gross Domestic Product
Gld	gulden	Guilder
GMD	Gemeenschappelijke Medische Dienst	Joint Medical Service
GSD	Gemeentelijke Sociale Dienst	Municipal Social Service
GUO	Gemeenschappelijk Uitvoerings Orgaan	Joint Administrative Body
HIS	Hoofdafdeling Individuele Subsidiëring	Rent subsidy department of VROM
hrs	uren	hours
IB	Informatiseringsbank	Government agency administering e.g. WSF and TS
IHK	Kamer van Koophandel van Koblenz *(Industrie- und Handelskammer zu Koblenz)*	Chamber of Commerce of Koblenz (Germany)
IHS	Individuele Huursubsidie	Rent subsidy
INSTIR	Innovatiestimuleringsregeling	Innovation subsidy programme
IOAW	Wet Inkomensvoorziening Oudere en gedeeltelijk Arbeidsongeschikte Werkeloze werknemers	Act on Income Provisions for Elderly and Partly Disabled Workers
IOAZ	Wet Inkomensvoorziening Oudere en gedeeltelijk Arbeidsongeschikte gewezen Zelfstandigen	Act on Income Provisions for Elderly and Partly Disabled Formerly Self-employed
IOO	Instituut voor Onderzoek van Overheidsuitgaven	Institute for Research of Government Expenditures

IPR	Investeringspremieregeling Regionale Projecten	Subsidy for regional investment projects
IPZ	Investeringspremieregeling Zeescheepvaart	Investment Subsidy for Maritime Shipping
IRS	(Belastingdienst van de Verenigde Staten)	Internal Revenue Service
m	miljoen	million
MvF	Ministerie van Financiën	Ministry of Finance
n	steekproefomvang	sample size
NIB	De Nationale Investeringsbank N.V.	National Investment Bank
NIPO	Nederlands Instituut voor de Publieke Opinie en het markonderzoek	A commercial polling institute
OECD	Organisatie voor economische samenwerking en ontwikkeling (OESO)	Organisation for Economic Co-operation and Development
OF	Ouderdomsfonds	Old Age Pensions Fund
O&W	Ministerie van Onderwijs en Wetenschappen	Ministry of Education and Science
PAYE	Loonbelasting	Pay as you earn; wage tax
PBTS	Programmatische Bedrijfsgerichte Technologiestimulering	Technology subsidy programme
PIT	Inkomstenbelasting	Personal Income Tax
p.p.	per persoon	per person
RGF	Raad voor de Gemeentefinanciën	Council for Municipal Finance
ROM	Regionale Ontwikkelingsmaatschappij	Regional Development Corporation
RWW	Rijksgroepsregeling Werkloze Werknemers	State Group Regulations for Unemployed Persons
SCP	Sociaal en Cultureel Planbureau	Social and Cultural Planning Office
SFr	Zwitserse frank	Swiss Franc
sign.	statistisch significantieniveau	statistical significance
SMEs	Midden- en Kleinbedrijf	Small and Medium-sized Enterprises
Spf	Spoorwegpensioenfonds	Railway workers pension fund
SVB	Sociale verzekeringsbank	Social Insurance Bank
SVr	Sociale verzekeringsraad	Social Insurance Council

TCA	Belastingdienst	Tax and Customs Administration
TF	Toeslagenfonds	Supplementary Benefits Fund
TS	Tegemoetkoming Studiekosten	Study-cost compensation
TW	Toeslagenwet	Supplementary Benefits Act
UK	Verenigd Koningkrijk	United Kingdom
US, USA	Verenigde Staten van Amerika	United States of America
VAT	BTW, omzetbelasting	Value Added Tax
V&W	Ministerie van Verkeer en Waterstaat	Ministry of Transport and Public Works
VROM	Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer	Ministry of Housing, Physical Planning and Environmental Protection
VUT	Vervroegde Uittreding	Early retirement
WABM	Wet Algemene Bepalingen Milieuhygiëne	General Environmental Provisions Act
WAO	Wet op de Arbeidsongeschiktheidsverzekering	Disability Insurance Act
WSF	Wet Studiefinanciering	Study Grant Law
WGF	Wachtgeldfondsen	Redundancy Pay Funds
WVC	Ministerie van Welzijn, Volksgezondheid en Cultuur	Ministry of Welfare, Public Health and Culture
WW	Werkloosheidswet	Unemployment Insurance Act
WWV	Wet Werkeloosheidsvoorziening	Unemployment Assistance Act
ZFW	Ziekenfondswet	Health Insurance Act
ZK	Ziekengeldkassen	Sickness Benefit Funds
ZW	Ziektewet	Sickness Benefits Act

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Stellingen

behorende bij het proefschrift van Maarten Allers, getiteld 'Administrative and Compliance Costs of Taxation and Public Transfers in the Netherlands'

1 De scheve verdeling van de kosten die bedrijven moeten maken om te voldoen aan verplichtingen op het gebied van overdrachten (belastingen, uitkeringen, subsidies) verslechtert de concurrentiepositie van het midden- en kleinbedrijf en stimuleert economische concentratie.

2 De kosten die zijn verbonden aan het systeem van overdrachten dienen zoveel mogelijk door de publieke sector te worden gedragen, ook als inschakeling van de particuliere sector op het eerste gezicht goedkoper lijkt. Slechts voor zover dit onvermijdelijk is, of voldoende kostenbesparing met zich meebrengt ter compensatie van schadelijke bijwerkingen, mag de particuliere sector hiermee worden belast.

3 Bij de besluitvorming over overdrachtsregelingen dienen de kosten van inning, uitvoering en naleving stelselmatig te worden meegewogen.

4 Een variabele die tot norm wordt verheven is tot uitholling gedoemd.

5 Schijnnauwkeurigheid is een verwerpelijke vorm van onnauwkeurigheid.

6 Vergeleken met de staatsschuld krijgt de milieuschuld weinig aandacht van economen.

7 De additionele kosten van het naast elkaar bestaan van openbaar en bijzonder onderwijs - die alleen al voor het lager onderwijs op een half miljard gulden zijn geschat (Koelman, *Kosten van de verzuiling*, proefschrift Rotterdam, 1987) - blijven bij ombuigingen ten onrechte buiten schot.

8 Het vaak veronderstelde positieve verband tussen parkeergelegenheid en de economische ontwikkeling van binnensteden wordt niet ondersteund door de uitkomsten van het beschikbare economische onderzoek (o.a. Apel en Lehmbrock, *Stadverträgliche Verkehrsplanung. Chancen zur Steuerung des Autoverkehrs durch Parkraumkonzepte und -bewirtschaftung*, Berlin: Deutsches Institut für Urbanistik, 1990, pp. 71 e.v.).

9 Aangezien er meer naar sport wordt gekeken dan dat er aan sport wordt gedaan, moet worden gevreesd dat de bijdrage van sport aan de lichamelijke conditie van de gemiddelde Nederlander per saldo beperkt blijft.